ournal

of the AMERICAN PHARMACEUTICAL ASSOCIATION

APRIL 1959

Practical Pharmacy Edition

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Journal
of the **AMERICAN PHARMACEUTICAL ASSOCIATION**

Practical Pharmacy Edition

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This Journal is the official monthly publication of the AMERICAN PHARMACEUTICAL ASSOCIATION, dedicated to the elevation and unification of the profession of Pharmacy through communication of authoritative scientific, professional, and cultural information. It is devoted to the education of pharmaceutical practitioners, and it functions as the professional voice of Pharmacy, which is directed to all members of the profession of Pharmacy in education, government, industry, and professional practice.

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EDITORIAL

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The President of the United States has proclaimed April 14 Pan American Day and April 12–18 Pan American Week.

All pharmacists should urge their customers to receive 3 Salk vaccine injections against polio at once, with a 4th injection every 3 years. April, the seasonal low point for the disease, is a good time for the 40,000,000 uninoculated Americans to prepare for the summer upsurge.

Some groups believe a cheap birth control pill such as the one about to be made available in India containing *p*-xylohydroquinone would create vast moral problems by encouraging promiscuity.

The high levels of radioactivity found sometimes in wheat, rice, and other grasses and vegetables are due to the fact that these plants pick up more fallout from the rain falling directly on the leaves than from the roots and soil, according to the U.S. Atomic Energy Commission.

The FDA has been urged to give increased attention to smaller drug manufacturers.

The Secretary of the Department of Health, Education, and Welfare has been asked to recommend to Congress revision of the Durham–Humphrey Law to liberalize the prescription refill section.

The Food and Drug Administration has again been asked to reconsider the method of changing a drug from prescription to over-the-counter status, since some laymen are not competent to evaluate fully some technical warnings in labeling.

It has been suggested that the FDA refrain from prosecuting pharmacists except those who are violation-prone.

Between 1946 and 1955 the United States built new school facilities for more than twice as many children as did Russia, according to recent testimony before the House Education and Labor Subcommittee.

People prefer, if money were available for only one project, to support a new program for medical research, even above juvenile delinquency, scientific research, and putting the first man on the moon, according to a recent survey by the University of Michigan Survey Research Center.

Unionism has created a serious situation when the delivery of oxygen, surgical supplies, and other vital needs to hospitals is prevented, as happened recently in New York City.

The Public Health Service is not recommending mass vaccination against the mild Type B flu which has broken out in a few areas of the U.S.

Last Minute News

Grants by the Atomic Energy Commission for equipping college and university laboratories has reached $1,810,707 for 152 grants to 110 institutions.

The first issue of the Journal of Medicinal and Pharmaceutical Chemistry, edited by Dr. Arnold H. Beckett, Chelsea School of Pharmacy, London, and Dr. Alfred Burger of the University of Virginia, has appeared.

According to the National Association of Boards of Pharmacy, it appears that this year for a change a sufficient number of persons will be graduated from colleges of pharmacy to meet replacement needs of the profession.

Canine vaccine against rabies can paralyze animals other than dogs and cats if administered to them.

The opium dens of Thailand, one of which alone sleeps 8,000 addicts, have been ordered to close by June 30.

Teeth grow in rings like trees and record the diseases and injuries of the body, according to Dr. Maury Massler, University of Illinois Dental School.

Dental disease is the Nation's most chronic and expensive health problem, according to Mrs. E. Arthur Underwood, D.D.S., Vancouver, Washington, who says that children should be taken regularly to the dentist beginning at about age 3.

Cancer is now the leading cause of death among women aged 30–54 and accounts for 1 out of every 6 deaths in this country.

Lederle's 24-step synthesis of a tetracycline derivative has confirmed the structure of the naturally produced antibiotics with the tetracycline nucleus.

Each drug representing a new advance in medicine that is marketed in the United States costs on the average about $6,000,000 for total research and development effort.

Medicinal spirits stamp tax must be paid on or before July 1, 1959 or before commencing business to avoid penalties and interest.

According to a survey just completed by the Pharmaceutical Manufacturers' Association, nearly 115,000 substances were tested (1,900 in humans) during 1958 at a cost of $177,000,000 to the manufacturers.

All but one of the antibiotics discovered since World War II and produced commercially in America have been the result of research programs conducted in the U.S., according to President McKeen of Pfizer.

Approximately 500,000 veterans who served in the Korean and post-Korean period whose insurance policy numbers are preceded by the letters "RS" may exchange their present 5-year term policies for new term policies that carry the same face value at a greatly reduced premium cost.

Type A influenza has been sweeping the Soviet Union, and Type B infections have been sweeping Europe.

Type B influenza virus has been identified in 5 areas of the United States: the Eastern portion of Massachusetts, the Washington, D.C. metropolitan area, Southern Michigan, Northern Indiana, and Central Iowa.

Polyvalent flu vaccine now available is effective in preventing Type B flu as well as other important types. Type B flu, which is ordinarily far less severe than the Asian variety, lasts only about 4 days.

Gastric bleeding, sometimes massive, in 40% to 50% of patients admitted to the hospital is caused by aspirin, according to clinicians reporting in a recent issue of Lancet.

Physicians fear the outbreak of a severe polio epidemic this year unless Salk inoculations are received in much greater numbers by the 50% of the population under 40 who have not received the 3 injections.

The false concept that polio is a disease of the past may be keeping people from getting their full series of Salk injections, according to Health Information Foundation.

In the Western world, New York City has the highest death rate for coronary heart disease in men 30 years of age and older.

Dr. Nathaniel B. Kurnick and his associates of the Veterans Administration have announced successful preservation of living bone marrow cells in a frozen state to be used for saving the lives of persons exposed to radiation.

EDTA (ethylenediamine tetraacetic acid) has been shown by Dr. James Price of the University of Wisconsin to be effective in treating acrosclerosis characterized by a metabolic disturbance which induces large deposits of calcium in body tissues.

About 22,000,000 American adults—1 out of 8—are now toothless, and about 65% of all persons 75 and older are so affected.

A 2-year study by the American Medical Association shows that the smoking of only 3 cigarettes in a closed automobile uses up so much oxygen that a driver's eyesight is seriously hampered.

A new live polio vaccine taken by mouth has been proven to be highly successful in Costa Rica, where all those younger than 13 are required to swallow it, and in Uruguay, where all under 15 must do so. The vaccine, which has already been given successfully to more than 550,000 persons, results from the work of Dr. Herald R. Cox of Lederle, Dr. Albert B. Sabin of the University of Cincinnati, and Dr. Hilary Koprowski of the Wistar Institute.

Cancer takes the lives of about 4,000 children under 15 years of age each year in this country, more lives than any other disease, for the age group 5–14.

A 17-year-old boy recently died after making a $10 wager that he could and then did drink a fifth of whiskey in less than 5 minutes.

The 424,000,000,000 cigarettes sold in 1958 (a new all-time U.S. record), even when provided with filters, still deposit stains on the teeth.

After accidents, suicide is the most common cause of death in some universities. High rates per 100,000 are noted at Cambridge (21.8), Oxford (30.5), and Yale (13.0), with a very high incidence among colored undergraduates at Cambridge reaching 85.7 per 100,000. Most suicides occur near examination time and at the beginning of the academic year.

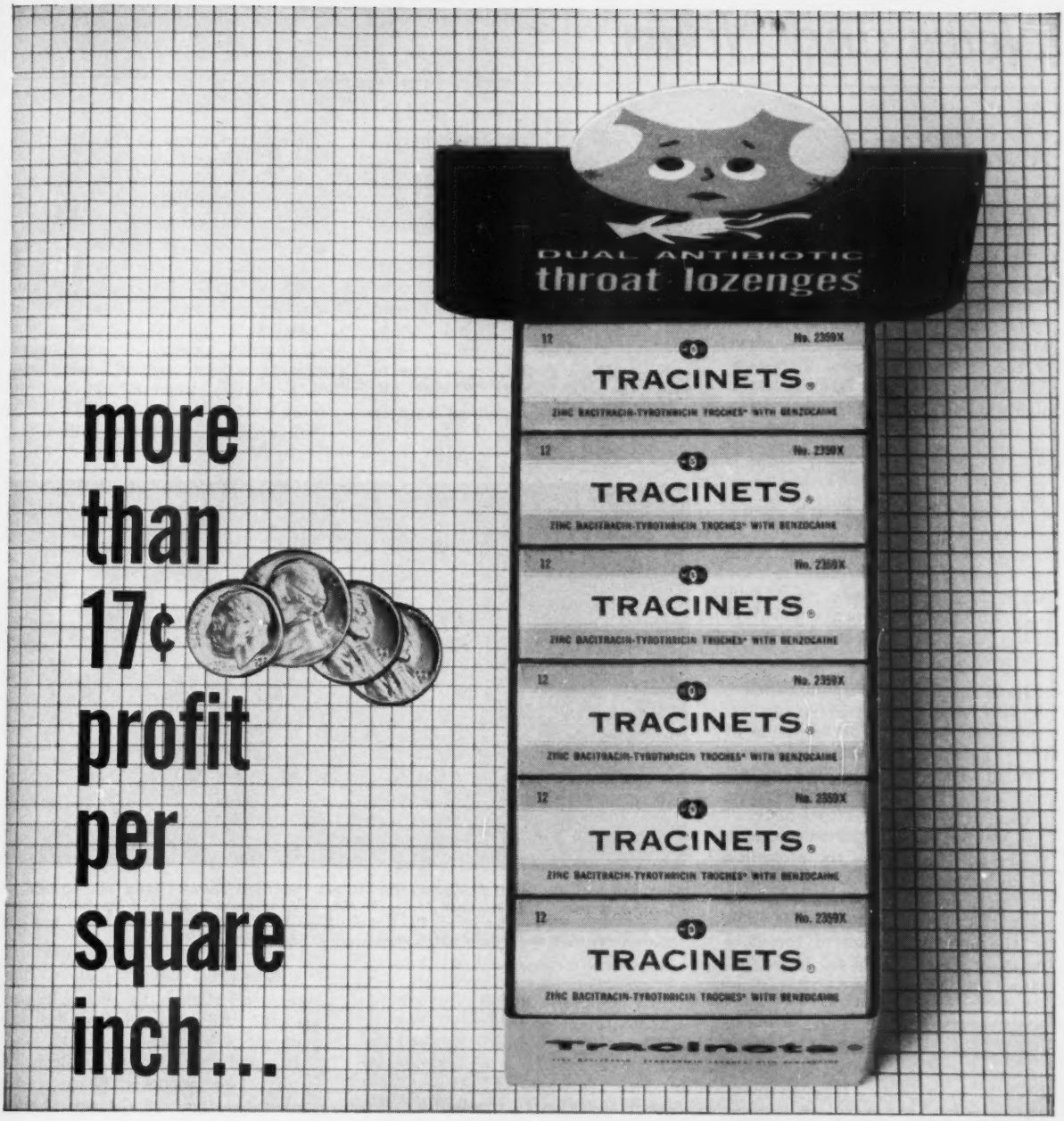
Although workers in the U.S. have irradiated potatoes, meat, vegetables, and milk to preserve them, the Russians are the first on the market with irradiated foods.

An unknown illness has attacked about 20% of the Alaskan population in 2 communities where older people developed headaches, wheezing, vomiting, and became exhausted. The death rate has been about 2%.

Higher income groups gain in weight and develop higher blood pressure while the lower income groups tend in the opposite direction.

The first fully confirmed human death from rabies inflicted by the bite of a rabid insect-eating bat has occurred.

About 6% of the total population have experienced some type of epilepsy at some time in their lives, according to *Therapeutic Notes* published by Parke, Davis & Company.



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News and Notes

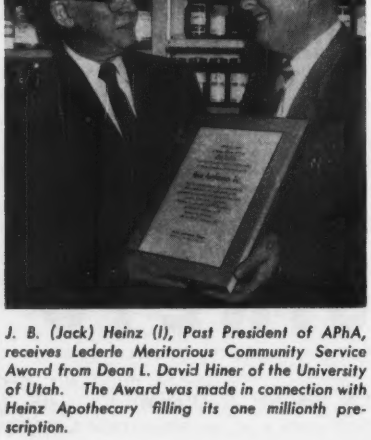
Associations

American Academy of Political and Social Science has announced the 63rd Annual Meeting on April 10–11 at the Warwick, Philadelphia.

American Bar Association will observe Law Day on May 1. In writing to *Ross L. Malone*, President of the Association, *Louis J. Fischl*, APhA President, paid "tribute to the high standard of ethics and dedication to our form of government and the supremacy of law in our lives advocated and observed by the American Bar Association."

American Chemical Society annual meeting was held April 5–10 in Boston, at which an award was made to *Dr. John C. Sheehan* of the Massachusetts Institute of Technology for his achievements in synthesizing penicillin and for research in the synthesis of peptides.

American College of Apothecaries—*Louis J. Fischl*, APhA President, has been selected as the 1959 recipient of the J. Leon Lascoff Memorial Award. Named in honor of one of the original founders of the College, the Award is presented by the ACA "to a pharmacist who has contributed substantially to the advancement of the profession of Pharmacy and to the improvement of prescription practice in the country." Presentation will be made at the annual banquet of the ACA on May 19 at the Hotel Roosevelt, New Orleans.



J. B. (Jack) Heinz (l), Past President of APhA, receives Lederle Meritorious Community Service Award from Dean L. David Hiner of the University of Utah. The Award was made in connection with Heinz Apothecary filling its one millionth prescription.

American Foundation for Pharmaceutical Education—At the 17th annual meeting held on March 5 in New York, the following officers were elected: President: *John J. Toohy* (Gen. Mgr., E. R. Squibb & Sons); Vice President: *John G. Bill* (Pres., Merck Sharp & Dohme); Treasurer: *Carl K. Raiser* (Director of Distribution, Smith Kline & French Laboratories); Counsel: *James F. Hoge* (Rogers, Hoge & Hills); and Secretary: *W. Paul Briggs*.

American Pharmaceutical Association—*President Louis J. Fischl* recently addressed the following groups: University of Southern California, Student Branches at Xavier and Loyola Universities, a general meeting at New Orleans, and the student branch and Pharmacy Seminar at the University of South Carolina.

Speaking engagements of *Dr. William S. Apple*, APhA Assistant Secretary, and other recent activities have consisted of the following: AACP Committee on Recruitment Aids meeting; Indiana State Hospital Pharmacy and Indianapolis APhA Branch meeting; NPC Pharmacy-Education Industry Forum; APhA Student Branch, Toledo, and Northwest Ohio Branch; Indiana County, Pa. Pharmaceutical Society; and Massachusetts College of Pharmacy APhA Student Branch. Dr. Apple's invitations already accepted for future addresses include: Brooklyn College of Pharmacy APhA Student Branch on April 22; Florida State Pharmaceutical Association on May 19; Utah State Pharmaceutical Association on June 7; and Michigan State Pharmaceutical Association on June 22.

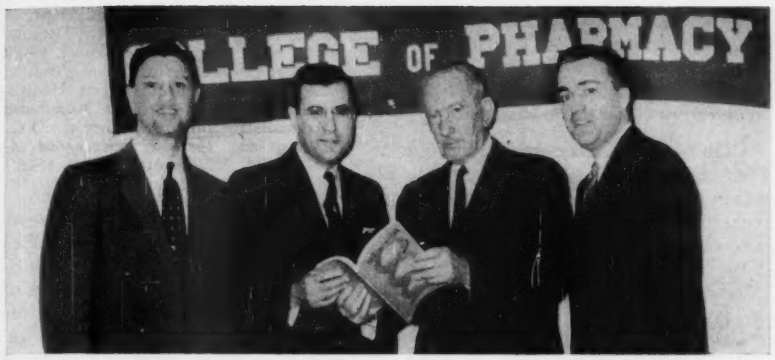
Dr. Robert P. Fischelis, Secretary of the APhA, recently visited Fargo, North Dakota, where he spoke to the student branch; Minneapolis, Minn., where he spoke to a joint meeting of the local branch, student branch, hospital pharmacists' society, the local association of retail druggists, and others; St. Louis, Mo., where he addressed the entire student body of the St. Louis College of Pharmacy and Allied Sciences; and Monroe, La., where he participated in the inauguration of a new president of Northeast Louisiana State College and conferred with the Dean and faculty of the School of Pharmacy regarding the affairs of the new student branch organized there.

APhA Secretary Dr. Robert P. Fischelis confers with the North Dakota Board of Pharmacy on legislative matters. L to r: Dean Clifton E. Miller; Al Doerr and Ordner S. Trom, Secretary and President, respectively, of the Board; Dr. Fischelis; James W. Moore, member of the Board; and John J. Craven, President, North Dakota State Pharmaceutical Association.

Animal Health Institute—The 19th Annual Meeting will be held at the Shoreham Hotel, Washington, D.C., April 12–14.

Speakers will represent U.S. Dept. of Agriculture; Federal Food and Drug Administration; American Feed Control officials; the Health of Animals Division of the Dept. of Agriculture of Canada; the American Feed Manufacturers Association; and the Animal Health Institute.

D.C. Pharmaceutical Association held a general membership meeting on March 19 at which was discussed the proposed Pharmacy Act for the District of Columbia.



HEALTH NEWS INSTITUTE Exec. Vice Pres. Chet Shaw (2nd from r) points out how pharmacists can help eliminate a bad press by stressing facts in the Institute's "Facts about Pharmacy and Pharmaceuticals" to Dean Andrew J. Bartilucci (2nd from l) of St. John's University College of Pharmacy. At left is Prof. Ignatius J. Bellafiore, Faculty Adviser, and at right Stanley Aaron, President, respectively, of the APhA Student Branch.

Georgia Pharmaceutical Association is explaining to the public what is behind the prescription cost through the use of the film "The Constant Search" produced by Lakeside Laboratories. The response from TV stations has been gratifying, according to *Regina Baird*, Executive Secretary of the Association, and all presentations have been made as a public service, without charge to the Association for time.

Iowa Pharmaceutical Association—At the recent annual meeting, *A. Phillip Coontz* was installed as President, and other officers elected for the following year are: *Max Eggleston*, President-elect; *Leo Brau*, 1st Vice President; *Elmer Norgaard*, 2nd Vice President; and *John Vennker*, Treas.

Louisiana Board of Pharmacy—*William P. O'Brien* recently received the Charles E. Dunbar Annual Award for exemplary and distinguished Civil Service as Inspector for the Board.

National Association for Mental Health—Through Operation Friendship, NAMH hopes to bring 750,000 visitors—as many visitors as patients—to the Nation's mental hospitals during Mental Health Week, April 26 to May 2. Participating will be more than 38 national organizations with a total membership of about 50,000,000.

National Health Council—By unanimous vote of the Executive Committee of the Council, membership of the American Hospital Association has been re-established in the Council.

National Pharmaceutical Council—*Carl K. Raiser*, President, has announced the appointment of a 21-man committee known as the Hospital Pharmacy Practice Committee to study industry's relations to hospital pharmacy. The committee will work closely with *William E. Woods*, assistant to *Newell Stewart*, Executive Vice President.

Dr. Joseph H. Kern, Associate Professor of Pharmacy Administration, Northeast La. State College, has recently been made a member of the NPC Operating Committee. One of the 14 Committee members is *Dr. W. S. Apple*, APhA Asst. Secretary.

Drug, Chemical, and Allied Trades Section of the New York Board of Trade—The 33rd Annual Dinner was held on March 5 at the Waldorf-Astoria, New York. Speaking to the 2,600 guests, *Secretary of Labor James P. Mitchell* commented on the tremendous challenge the success of the chemical and drug industries has posed for America. "Within a generation or two," he said, "you people have changed the face of America. A man who might have seemed too old 20 years ago is, at a similar age today, looking forward to years more of productive usefulness."

Ohio State Pharmaceutical Association—The 4th annual Ohio Pharmaceutical Seminar, limited to 65 students, was held March 22–26 at the College of Pharmacy, Ohio State University.

Parenteral Drug Association—Mid-West Meeting will be held on April 17 at the Edgewater Beach Hotel, Chicago.

Hubert E. Boyden, Secretary, has announced the transfer of the Administrative Office of the Association from New York to 1420 Snyder Avenue, Philadelphia, and the succession of *Arthur D. Herrick* in his capacity as Executive Director by the officers of the Association.

Society of Cosmetic Chemists—The New York Chapter will hold a special meeting on May 6 at the Geigy Chemical Corp. Ardsley, N.Y. plant.

Dr. W. Paul Briggs, Executive Director, American Foundation for Pharmaceutical Education, honored by Alpha Zeta Omega Fraternity's Pi Chapter of Washington, D.C. with presentation of oil portrait. L to r: AZO National President William A. Goodman; Dr. Briggs; Pi Chapter President Jack L. Kramer; and Dr. Charles A. Bliven, Dean, George Washington University College of Pharmacy.

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St. Louis College of Pharmacy Alumni Association recently presented Award for Distinguished Service to Pharmacy to W. Earl King (2nd from r) and Award for Distinguished Service to Medicine and Pharmacy to Dr. Axel Norman Arneson (2nd from l). At extreme left is Fred Nehring and at extreme right James A. Stoker, President, Alumni Association.

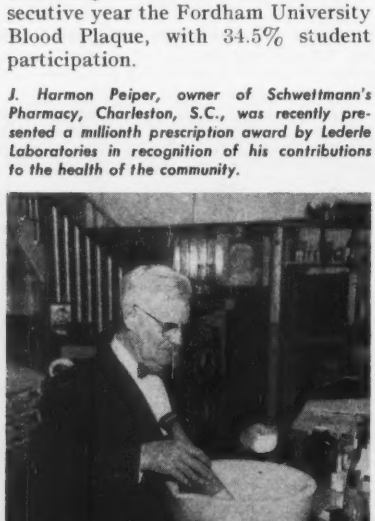
Colleges

Brooklyn College of Pharmacy—The second session of BCP's Public Health Forum to be held on April 21 will be conducted by *R. Blayne McCurry*, President of SchenLabs Pharmaceuticals.

Drake University College of Pharmacy's 1959 institute was held on March 25. Speakers included *Wilbur E. Powers*, Secretary of the National Pharmaceutical Council; *Dr. Frank T. Maher* of the Mayo Clinic; *Dr. John W. Green, Jr.*, pathologist at Iowa Methodist Hospital, Des Moines; *Dr. Frank E. Gardner*, Professor of Christian Thought at Drake; and *William S. Wimer*, lecturer in Pharmacy Law at Drake.

Fordham University College of Pharmacy has won for the third consecutive year the Fordham University Blood Plaque, with 34.5% student participation.

J. Harmon Peiper, owner of Schwettmann's Pharmacy, Charleston, S.C., was recently presented a millionth prescription award by Lederle Laboratories in recognition of his contributions to the health of the community.



New England College of Pharmacy—Open House held on February 18 proved most successful, with demonstrations and experiments well received by more than 300 visitors.

Ohio State University College of Pharmacy—Speakers at the Fourth Annual Seminar on March 24–25 included *Dr. W. Paul Briggs*, whose subject was "Survival Insurance"; *Nevis Cook* of the FDA speaking on "Prescription Records"; and *Charles R. Beall* talking on "Improving the Prescription Department."

Dr. Chauncey D. Leake, Assistant Dean of the School of Medicine and Professor of Pharmacology, has been appointed Consulting Editor of *Geriatrics*, *Dr. Walter C. Alvarez*, Editor, has announced.

Philadelphia College of Pharmacy and Science—On February 16, *Dr. and Mrs. E. Fullerton Cook* left on a 4-month plane and boat trip around the world. Sailing from New York, they will visit Panama, Los Angeles, the Philippines, China, Japan, Borneo, Java, Thailand, Singapore, Malay Federation, Sumatra, Ceylon, India, and Egypt, and finally return to Boston near the end of June. The ship *Cingalese Prince* of the Prince Line carries about 12 passengers.

St. John's University College of Pharmacy—Panel discussions at the Pharmacy Congress on March 17 included industrial, hospital, and community pharmacy, and medical detailing. Participants as moderators, panelists, or individual speakers included:

Milton Lupow, Divisional Mgr., Barry Division of Ketchum and Company; *Dr. John J. Sciarra*, Asst. Prof. of Pharmaceutical Chemistry, St. John's University College of Pharmacy; *Louis Kazin*, Editor, Drug Topics; *S. B. Jeffries*, Exec. Vice Pres., Sang and Pollak Drug Service Company; *Dr. John J. Burns*, Deputy Chief, Chemical-Pharmacology Section, National Heart Institute, National Institutes of Health; *Harry A. Kimbriel*, Exec. Vice Pres., National Wholesale Druggists' Assn.; *Sidney H. Willig*, Divisional Sales Mgr., Winthrop Laboratories; *Irving Schmetterling*, Divisional Sales Mgr., Schering Corp.; *Lon J. Scal*, Divisional Sales Mgr., Upjohn Company; *Anthony Dallacasa; Robert C. Bogash*, Pres., American Society of Hospital Pharmacists; *Sister M. Etheldreda*, Chief Pharmacist, St. Mary's Hospital; *Dr. W. Arthur Purdum*, Director, Pharmaceutical Services, Johns Hopkins Hospital; *Julius E. Stolfi, M.D.*, Long Island College Hospital; *Norman Baker*, Apothecary in Chief, The New York Hospital; *Arthur W. Dodds*, Chief Pharmacist, U.S. Public Health Service Hospital, Staten Island, N.Y.; *Jack Cooper*, Director, Pharmacy Research and Development Division, Ciba Pharmaceutical Products; *Dr. Arnold D. Marcus*, Research Associate, Merck Sharp and Dohme; *Dr. Leon Lachman*, Senior Research Pharmacist, Ciba Pharmaceutical Products; *Dr. J. A. Campbell*, Chief, Vitamin and Nutrition Section, Dept. of National Health and Welfare, Ottawa, Canada; and *Dr. Earl L. Meyers*, Chief New Drug Officer, New Drug Branch, Bureau of Medicine, Dept. of Health, Education, and Welfare, Food and Drug Administration, Washington, D.C. Presiding was *the Very Reverend John A. Flynn, C.M.*, President of St. John's University.

St. Louis College of Pharmacy—A series of 4 lectures on radioisotopes was held at the Veterans Administration Hospital under the auspices of the Residence Training Program for Hospital Pharmacy of the College. The lectures were given by *Dr. Robert E. Mack*, Chief of Medicine and Director of Radioisotope Research at the Veterans Hospital, St. Louis.

Dr. Robert P. Fischelis, Secretary and General Manager of the American Pharmaceutical Association, addressed the student body of the College on February 20. He discussed a few of the activities of the APhA on behalf of the profession. There was considerable student interest, and a lengthy discussion period followed.

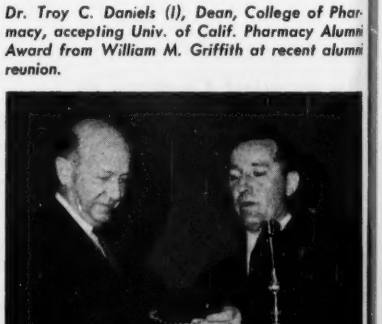
A Pharmacy Refresher was held at the College on April 9. Panel discussions included "Operating a Pharmacy Successfully" and "Improving Relations with the Medical Profession." Sessions were held in the morning and afternoon, followed by Open House during the evening.

University of Georgia—*Dean Kenneth L. Waters* of the School of Pharmacy has announced a record high student enrollment of 295 for the winter quarter, compared with 285 for the fall quarter and 261 for the 1957–58 school year.

The annual Pre-Pharmacy Student Day was held on March 7, featuring exhibitions of active demonstrations of pharmaceutical procedures and followed by Open House and luncheon.

University of Houston—Inspection of the College of Pharmacy for con-

Dr. Troy C. Daniels (l), Dean, College of Pharmacy, accepting Univ. of Calif. Pharmacy Alumni Award from William M. Griffith at recent alumni reunion.



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The Physician's Medication for The Patient's Complaint of

"nervous indigestion"

a frequent complaint

DONNAZYME therapy provides a multiple approach to treatment of functional GI disorders compounded by inadequate digestion: Antispasmodic action decreases spasm and hypermotility. Phenobarbital calms the patient and enhances the antispasmodic action. And digestive enzymes supplement the patient's own enzymes that may be diminished, especially in patients over 40.

DONNAZYME is getting intensive national advertising right now, and it will be detailed in your locality during the next few months.

Even now you can think of one or more of your nearby physicians who is going to be greatly interested in DONNAZYME . . . Better check with your wholesaler on the next call and get ready for those scripts!

formula:

Each composite tablet contains the equivalent of one-half of a DONNATAL® tablet plus digestive enzymes.

In the acid-soluble outer layer—

Hyoscyamine sulfate	0.0518 mg.
Atropine sulfate	0.0097 mg.
Hyoscine hydrobromide	0.0033 mg.
Phenobarbital (⅛ gr.)	8.1 mg.
Pepsin, N.F.	150 mg.

In the enteric-coated core—

Pancreatin, U.S.P.	300 mg.
Bile salts	150 mg.

tablet-within-a-tablet

The special core-and-shell-construction of DONNAZYME allows the release of the natural belladonna alkaloids, phenobarbital, and pepsin in the stomach. Enteric coating insures the release of pancreatin and bile salts in the small intestine only, where they occur naturally.

packaging:

Kelly Green DONNAZYME tablets are available in bottles of 100 and 500.

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Ethical Pharmaceuticals of Merit since 1878 RICHMOND 20, VIRGINIA

Robins

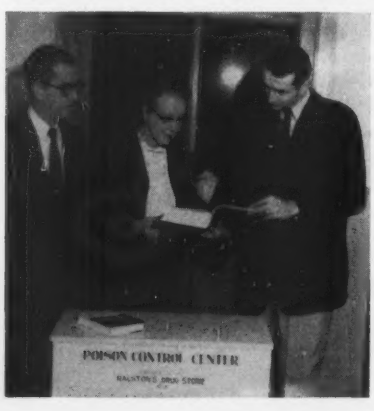
Pfizer Laboratories Pharmacy Service Manager Burns Geiger (l) spoke on March 21 at the Cleveland Society of Hospital Pharmacists seminar. Pfizer has announced the appointment of Robert F. Geissler (c) as Products Marketing Manager for the new Family Products Dept. and of Albert E. Woeltjen, M.D., (r) as Associate Medical Director of Pfizer Laboratories.

tinued accreditation was made March 9–10 by the American Council on Pharmaceutical Education, the committee consisting of: *Dr. Melvin W. Green*, Director of Educational Relations for the Council; *Dr. George D. Beal*, member of the Council; and *Leon L. Kahanek*, member of the Texas State Board of Pharmacy.

University of Nebraska—1959 Spring Pharmacy Seminar was held March 9–10. Following the welcome address by *Dr. Joseph B. Burt*, Dean of the College of Pharmacy, were talks by a number of outstanding speakers. *APhA President Louis J. Fischl* spoke on "The Activities of the American Pharmaceutical Association."

University of Pittsburgh—Honoring Pittsburgh's bicentennial year, a special symposium on monoamine oxidase inhibitors was held at the Health Center on March 18. Speakers included *Dr. Lowell O. Randall*, Director of Pharmacology, Hoffmann-La Roche; *Dr. John H. Biel*, Director of Laboratories, Lakeside Laboratories; and *Amedeo S. Marrazzi, M.D.*, Director, Veterans Administration Laboratories in Neuropsychiatry, Pittsburgh.

First in the State of W.V. is the Poison Control and Information Center given to the Stonewall Jackson Memorial Hospital by M. B. Ralston, II, and M. B. Ralston, III, members of the American Pharmaceutical Association. L to r: Carl Cline, Hospital Manager; Dr. Theresa Snaith, President of the Hospital Medical Staff; and Minter B. Ralston, III.



University of Texas—*Dr. Frank P. Cosgrove*, member of the faculty of the College of Pharmacy, is drafting a section in the new *Chiropody Formulary*. The formulary will be updated annually and distributed to chiropodists by the Texas Pharmaceutical Association as new drugs to relieve foot conditions are developed and made available to retail pharmacies.

University of Wisconsin—The third annual Pharmacy Management Institute held on March 17–18 was attended by more than 150 pharmacists and high school students. Among the presentations were: "New Drug Acceptance by Physicians and Its Relationship to the Pharmacist" by *Daniel Tousman* and "Value of the Pharmaceutical Sales Representative to Maintaining Prescription Volume" by *Max Polinsky*, both of whom are Fellows, American Foundation for Pharmaceutical Education; "The Role of the Pharmacist as a Source of Professional Information to the Physician" by *Dr. Robert W. Hammel;* and an address by *Charles Rabe*, Director, Professional Relations, J. B. Roerig and Company. The future of Pharmacy looks very bright, according to Mr. Rabe, who said that "the work of practically all of us in Pharmacy is both humanitarian and interesting."

Three Rennebohm lectures were given at the University on March 16, 17, and 18 by *Dr. Emil Schlittler*, Vice-President and Director of Research for Ciba Pharmaceutical Products, on "The Drug Industry and Its Research Problems."

Government

U.S. Public Health Service–*Surgeon General Leroy E. Burney* has announced approval of 45 grants totaling $4,861,944 to help build and equip additional health research facilities in 40 institutions in 26 states. Included in these were grants of $516,977 for the Health Sciences Building at the University of Buffalo and $110,000 for research facilities for the School of Pharmacy at North Dakota Agricultural College. Final awards under the appropriation for the fiscal year ending June 30, these grants mark the completion of the initial 3-year $90,000,000 construction program authorized by the 84th Congress in July 1956, under which 496 grants have been awarded, on a matching basis, to 248 institutions throughout the U.S. and in Hawaii.

The U.S. Public Health Service has announced that a competitive examination for appointment of Biochemists to the Regular Corps of the United States Public Health Service will be held in various places throughout the country on April 21, 22, 23, and 24. Appointments will provide opportunities for career service in biochemistry, research, and public health.

Hospital

Alaska—*Surgeon Gen. Leroy E. Burney* of the U.S. Public Health Service has announced the awarding of a $2,861,000 contract for the construction of a 50-bed hospital and housing for personnel at Kotzebue, Alaska.

American Society of Hospital Pharmacists has announced the resignation of *Dr. William Heller* as President-elect to devote more time to the development of the American Hospital Formulary Service. *Vernon O. Trygstad* of Washington, D.C. will succeed Dr. Heller.

Jefferson Medical College Hospital—Members of the Pharmacy Service recently presented four discussions on "Accidental Poisoning in the Home." Programs were sponsored by the Greater Philadelphia Hospital Pharmacists' Association as part of its 20th Anniversary Celebration.

HAVE YOU $ $ TO BURN?

Few of us have—but most of us do just that!!! How?—By not adequately insuring our property.

THE DRUGGISTS' OWN
Service Security Savings
THE AMERICAN DRUGGISTS' INSURANCE CO.
American Building CINCINNATI, OHIO
INSURANCE CO.

CONSULT OUR AGENT

Little Traverse Hospital—*Norbert Wegemer*, pharmacist, was recently presented with a life membership in the Michigan State Pharmaceutical Association for "his outstanding work, both as a druggist in Detroit and later in Petoskey, where he came to retire."

Los Angeles County General Hospital—*Walter F. Hitzelberger*, Chief Pharmacist, has received an honorary degree of Master of Pharmacy from the Philadelphia College of Pharmacy and Science.

Wisconsin Hospital Pharmacists' Institute, held on April 9 at the University of Wisconsin, featured the following nationally known speakers: *Grover C. Bowles*, Director, Dept. of Pharmacy, Baptist Memorial Hospital, Memphis Tenn.; *Clifton J. Latiolais*, Director, Pharmacy Service, University Hospital, Columbus, Ohio; *Joseph Oddis*, American Hospital Association, Chicago; and *Don E. Francke*, Director, Pharmacy Service, University Hospital, Ann Arbor, Mich.

Industry

Armour Pharmaceutical Company—*Dr. Robert A. Hardt*, President, has announced a new distribution system, known as a "warehouse on wings," to expedite orders by air freight service to the East, Southeast, and Southwest.

Mead Johnson & Company—*John T. McLoughlin* has been appointed Vice President and General Manager of the Nutritional and Pharmaceutical Division, *Robert E. Sessions*, Executive Vice President, has announced.

Smith Kline & French Laboratories—*Dr. Rudolph H. Blythe*, Director of

Pharmaceutical Research, has been given the first of the new Scientific Posts recently established by its Research and Development Division, the Company has announced. The posts are designed to enable outstanding scientists to advance in the Division through the quality of their scientific research without the burden of administrative responsibilities, and the "Director" posts are reserved for those of 10–15 years of post-doctorate experience or the equivalent. Dr. Blythe is Past President of the APhA Philadelphia Branch and was winner of APhA's Ebert Medal in 1950.

Sterling-Winthrop Research Institute has announced that *Dr. Frederick C. Machod*, Director of the Physical Chemistry Laboratory since 1946, has been awarded the Order of Merit of France's Society for Encouragement of Research for his international contributions to physical, organic, and medicinal chemistry.

Spanish Pharmaceutical Industry Study Team touring the U.S. under sponsorship of the International Co-operation Administration (see This Journal, p. 124, March 1959) shown here visiting Eli Lilly and Company. L to r: José Macorra, Ramon Cornet, Francisco Martinez, Ignacio Prim, and William R. Gibson, Lilly tour escort.

Retailing

Brand Name Retailer-of-the-Year Awards, as announced by Brand Names Foundation, will be presented during Brand Names Week, April 12–19, to the following:

Drug Stores—Class I: Glaser Drug Co., St. Louis, *Morris Glaser*, Pres. Certificates of Distinction in this class go to: Parkview Drugs, Inc., Kansas City, Mo., *Philip Small*, Pres.; Standard Drug Co., Cleveland, *Robert W. Campbell*, Pres.; Williams Drug Co., Waco, Tex., *Charles B. Williams*, Pres.; and Gunning-Casteel, Inc., El Paso, Tex., *T. C. Gunning*, Pres.

Drug Stores—Class II: Sanders Prescription Pharmacy, St. Albans, Vt., *Harold J. Sanders*. Certificates of Distinction in this class will be received by: Buschbaum Drug Store, Ft. Wayne, Ind., *Delbert A. Buschbaum;* Wm. J. Koch, Pharmacists, Milwaukee, *Wm. J. Koch;* Kreiser Drug, Watertown, S.Dak., *M. A. Lauer;* J. Leon Lascoff & Son, Inc., New York City, *Frederick D. Lascoff*, Pres.

New York Retail Druggists' Association officers recently installed are: *Max Kirschner*, Pres.; *George Goldberg*, 1st V. Pres.; *Sol Komisaruk*, 2nd V. Pres.; *Arthur Dorsen*, Sec.; and *Irving Silbergleit*, Sec.

Sun Ray Drug Company, Philadelphia, recently was presented with the Squibb Prescription Award in recognition of its having filled over 5,000,000 prescriptions in 5 years.

International

Baxter Laboratories has announced the appointment of *Gunther O. Stieneke* as Market Development Manager for International Operations. Stieneke holds a doctor's degree in international law from Munich University and before joining Baxter was Manager, International Management Division, American Management Association.

Pakistan—The Third Pakistan Pharmaceutical Conference & Exhibition Karachi will be held on April 17–21.

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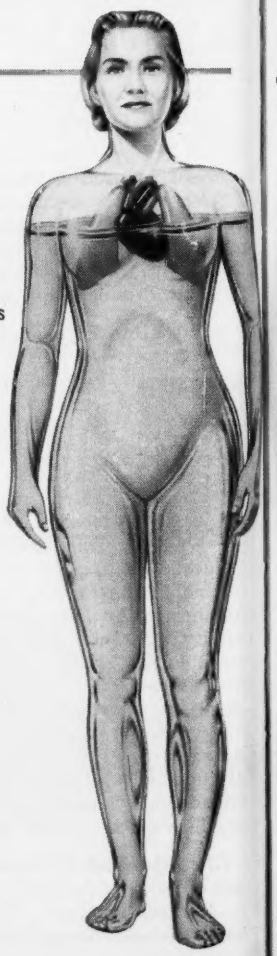
National Library Week
April 12-18, 1959

a new highly-active

From basic research—basic progress

A NEW MEASURE OF ACTIVITY



IN EDEMA:

- shows greater oral effectiveness than any other class of diuretic agent
- each 25 mg. HYDRODIURIL orally is equivalent to 1.6 cc. meralluride I.M.
- has been reported to be effective even in patients who do not respond satisfactorily to other diuretics
- has prompt onset of action with diuretic effectiveness maintained even on prolonged daily administration
- low toxicity—extremely well tolerated
- often achieves the benefits of a low salt diet without the unpleasant restriction

Indications: Hypertension, congestive heart failure of all degrees of severity, premenstrual syndrome (edema), edema and toxemia of pregnancy, renal edema—nephrosis, nephritis; cirrhosis with ascites, drug-induced edema, and as adjunctive therapy in the management of obesity complicated by edema.

dosage: In edema—one or two 50 mg. tablets of HYDRODIURIL once or twice a day.

In hypertension—one or two 25 mg. tablets or one 50 mg. tablet HYDRODIURIL once or twice a day.

supplied: 25 mg. and 50 mg. scored tablets HYDRODIURIL (Hydrochlorothiazide) in bottles of 100 and 1,000.

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Additional information on HYDRODIURIL is available to the pharmacist on request.

bibliography: 1. Esch, A. F., Wilson, I. M. and Freis, E. D.: 3,4-Dihydrochlorothiazide: Clinical Evaluation of a New Saluretic Agent. Preliminary Report; M. Ann. District of Columbia **28**:9, (Jan.) 1959. 2. Ford, R. V.: The Clinical Pharmacology of Hydrochlorothiazide; Southern Med. J. **52**:40, (Jan.) 1959. 3. Fuchs, M., Bodi, T., Irie, S. and Moyer, J. H.: Preliminary Evaluation of Hydrochlorothiazide ('HYDRODIURIL'); M. Rec. & Ann. **51**:872, (Dec.) 1958. 4. Moyer, J. H., Fuchs, M., Irie, S. and Bodi, T.: Some Observations on the Pharmacology of Hydrochlorothiazide; Am. J. Cardiol. **3**:113, (Jan.) 1959.

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HYDRODIURIL (HYDROCHLOROTHIAZIDE)

- highly-active derivative of chlorothiazide
- qualitatively similar to DIURIL® but at least 10 to 12 times more potent
- loss of potassium is clinically insignificant in the great majority of patients on normal diets

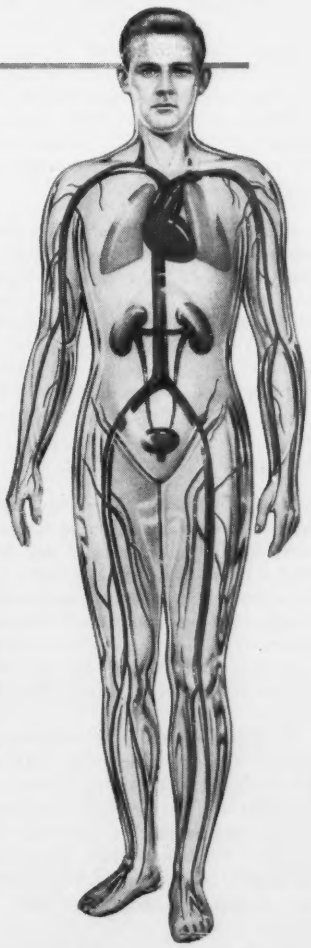
HYDRODIURIL*

NEW RELEASE

HYDROCHLOROTHIAZIDE

IN HYPERTENSION:

- effective by itself in some patients—markedly potentiates other antihypertensive agents
- provides background therapy to improve and simplify the management of all grades of hypertension
- has been reported by some investigators to have a greater antihypertensive effect in some patients than chlorothiazide at equivalent dosage
- does not lower blood pressure in normotensives
- reduces dosage requirements for other antihypertensive agents, often with concomitant reduction in their distressing side effects
- smooths out blood pressure fluctuations



precautions: It is important that the dosage be adjusted as frequently as the needs of the individual patient demand. When HYDRODIURIL is used with a ganglion blocking agent, it is mandatory to reduce the dose of the latter by at least 50 per cent, immediately upon adding HYDRODIURIL to the regimen.

HYDRODIURIL has shown no adverse effects on renal function; for this reason it may be used with excellent results even in patients for whom the organomercurials are contraindicated because of renal damage.

The excretion of potassium is much lower than that of sodium or chloride and, as is the case with DIURIL®, the loss of potassium is clinically insignificant in the great majority of patients on normal diets. If indicated, potassium loss may easily be replaced by including potassium-rich foods in the diet (orange juice, bananas, etc.).

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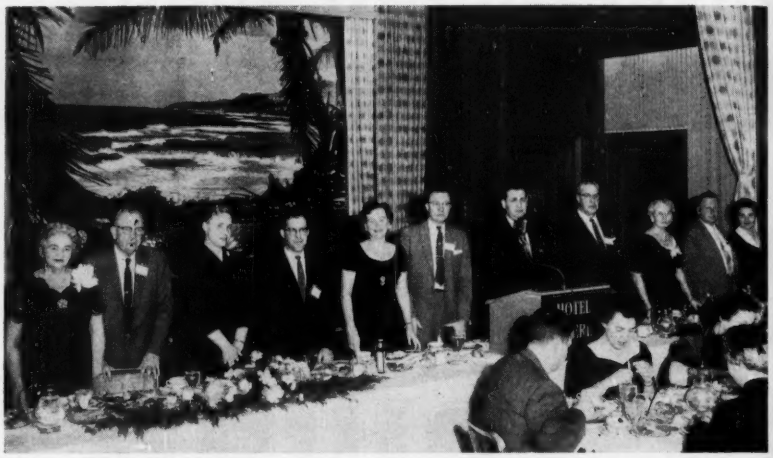
be stocked for heavy new and repeat Rx demand

Branch News



INDIANAPOLIS BRANCH shares midwinter banquet with ASHP. L to r: Mrs. Henry Heine; Mr. Heine, retiring ASHP Exec. Sec.; Mildred Weise; Dr. Glen Sperandio; Mrs. Jack Woodside; Jack Woodside, Branch Pres.; Dr. William S. Apple, APhA Asst. Sec. and featured speaker; J. Warren Lansdowne and Mrs. Lansdowne; Kenneth M. Wood and Mrs. Wood.

Central Utah Branch—Officers elected for 1959 are *James W. Francis*, President; *Thomas E. Marshall*, President-Elect; *J. Calvin Robinson*, Vice President; *Mrs. Nellie Vanderlinden*, Treasurer; *Joan Pascoe*, Secretary; and *Wayne M. Borg*, *Robert E. Erickson*, and *John Italasano*, Board Members. With exception of Mr. Italasano of Midvale, all are from Salt Lake City.

Cincinnati Branch—Officers elected for 1959 are: *Paul E. Norris*, President; *John F. Donohue*, Vice President; *Melvin A. Chambers*, Secretary; and *Robert A. Erion*, Treasurer.

Charleston Branch—1959 officers elected Feb. 11 are: *Arthur Guida*, President; *C. W. Ducker*, Vice President; *Dr. William H. Golod*, Secretary; *Elliott P. Botzis*, Treasurer.

Fresno-Madera County Branch—*Charles O'Malley*, Secretary-Treasurer of the Northern California Pharmaceutical Association, talked on "Benefits of Organized Pharmacy," and *Martin Winton* reported on the welfare program and state legislation, at recent meetings. *Bill Corneilson*, *Jack Enright*, *Gordon Satterberg*, *Doug Dorfmeier* of Fresno Co., and *Martin Calaway* of Madera Co. were elected to serve on the Board of Directors.

Indianapolis Branch—In cooperation with the American Society of Hospital Pharmacists, Indiana Chapter, this branch recently held a 1-day seminar, climaxed by a reception and midwinter banquet, the latter sponsored by Eli Lilly and Company. Featured seminar speakers were *J. Warren Lansdowne*, Ch., APhA House of Delegates; *Charles Broderick*, Dir., Marion Co. Civil Defense; *Dr. George T. Lukemeyer*, Indiana School of Medicine; *Harold O. Trotter*, Eli Lilly and Company; *Dr. Albert E. Jarvis*, Pi'man-Moore Co.; and *Aaron Andrews*, Indiana University Medical Center. Highlight of the banquet was an address by *Dr. William S. Apple*, APhA Asst. Sec. *Jack Woodside*, Br. Pres., served as toastmaster.

At the February-March joint meeting with Butler University Student Branch, a panel was presented entitled "I like my field of Pharmacy because—." *Kenneth M. Wood* spoke for Hospital Pharmacy; *Marlin Adams* for Sales; *Charles Hay* and *Edward Gee* for Retail Pharmacy; *Dr. Edward J. Rowe* of Butler University, for Education; and *Wayne Hilty* for Manufacturing. *J. Warren Lansdowne* and *Lawrence C. Heustis* assisted the panel during a discussion period following.

Memphis Branch—At the last 3 meetings members heard *Hugh F. Carey* talk on "Legal Problems in Pharmacy"; *Dr. R. R. Overman*, Professor of Clinical Physiology, University of Tennessee, speak on "Chemical Protection Against Radiation;" and *William Rudner*, of Merrill Lynch, Pierce, Fenner, & Smith, Inc., discuss the "Pharmaceutical Industry in the Stock Market."

New York Branch—With the cooperation of the colleges of pharmacy of Columbia, Fordham, Long Island (Brooklyn), and St. John's Universities, this branch sponsored a Guidance Conference on "Careers in Pharmacy," for high school students and teachers, March 20, at Washington Irving High School, New York City.

Featured speakers, who emphasized career opportunities in pharmacy for students approaching college were: *William F. De Neergaard*, practicing Brooklyn pharmacist, for retail pharmacy; *Norman Baker*, Apothecary-in-Chief, New York City Hospital, for hospital pharmacy; and *Jack Cooper*, Director, Pharmaceutical Research, Ciba Pharmaceutical Products, for industry. *Dr. Samuel Schenberg* presided, and *Louis Kazin*, Editor, *Drug Topics* and *Drug Trade News*, acted as moderator of the question and answer period following the addresses. The film "Time for Tomorrow" was shown at conclusion of the conference.

Northern California Branch—May 23 is the date selected for the annual banquet, to be given at Hotel Fairmont in San Francisco to honor seniors of Northern California Pharmacy schools. *Marie Kuck* will serve as Chairman.

APhA President *Louis Fischl* addressed members at a recent get-together, his address entitled "Aims of a Unified Voice for Pharmacy." *Robert Birkbeck*, retiring President, was presented with an engraved brass mortor and pestle, and he in turn presented his gavel to his successor, *Norman Guthrie*.

Northwest Ohio Branch—*Dr. William S. Apple* was guest speaker at the Feb. 24 meeting, speaking on "Pharmacy, Price, and the Public Interest."

Philadelphia Branch—*Dr. Louis Lasagna*, Associate Professor of Medicine, Johns Hopkins University Medical School spoke on "Sense and Nonsense in the Evaluation of Psychotropic Drugs" at the joint meeting

with the Medical Chemistry Section, Philadelphia Branch of the American Chemical Society, Feb. 12.

Puget Sound Branch—Members recently enjoyed a tour of the Kirkman Pharmacal Company, in Seattle conducted by *Bill Graham* and *Lyle Wellman*, co-owners, and *Keith Gregory*, *Grant Fagg*, *Mrs. Graham*, and *Mrs. Gregory*. Refreshments were served at its conclusion.

Washington, D.C.—Poison Control Centers and the spoon controversy were subjects chosen by the 3 principal speakers at a recent dinner meeting. *Henry L. Verhulst*, Assistant Director, National Clearing House for Poison Control Centers, USPHS, talked on "Are Poison Control Centers Really Necessary?"; *Dr. William Oberman*, Medical Director of Outpatient Department, Children's Hosp. spoke on "Experiences of the Local Poison Control Center"; and *George Griffenhagen*, Curator, Smithsonian Institution, and Branch President, presented "The Medical Lore of the Spoon—the Real Truth Behind a 300-year-old Controversy." *Morris Bortnick*, President, D.C. Pharmaceutical Association, served as moderator.

Student Branches

Howard College—April 30 and May 12 are the dates for the spring barbecue and Honors' Day banquet, respectively.

Howard University—Poison Control was the topic of discussion at the February 11 meeting, with *Dr. Walter M. Booker* of the Pharmacology Department speaking on "Common Poisons" and *Henry L. Verhulst*, Assistant Director, National Clearing House for Poison Control Centers, USPHS, presenting a film "Poisons and Poison Control."

State University of Iowa—Officers elected for 1958–59 are: *Robert M. Larson*, President; *Richard L. Watkins*, Vice President; *Robert N. Straw*, Secretary; and *Sylvia F. Patterson*, Treasurer.

Northeast Louisiana State College—*James C. Ussery*, Chief Pharmacist, St. Francis Hospital of Monroe, spoke on "Pharmacy Organizations," February 9. Membership of this branch now includes 80% of Pharmacy majors enrolled.

Earlier in January this branch held open house for the Women's Club of NLSC, with *Dr. Dale Cronk* and APhA student members demonstrating work of each department to orient visitors with phases of a pharmacist's education, and *Dean Ralph Wilson* spoke on "Pharmacy Curriculums."

NORTHERN NEW JERSEY BRANCH's 4-day 15th annual seminar opened Feb. 4 with Dr. Anthony S. Ridolpho's lecture on "Metabolic Diseases," here being discussed by (l) Arlene Rothenberg, Hackensack hospital pharmacy intern; Edward Zdawcznski, Boonton pharmacy owner; Dr. Ridolfo, Lilly Research Labs.; and Dr. Morton J. Rodman, Prof. of Pharmacology, Rutgers Univ.

Ohio Northern University—At the February 5 meeting *Merrill J. Insley*, Ohio State Board of Pharmacy, discussed "Pharmacy Law."

Ohio State University—*Merrill J. Insley*, Ohio State Board of Pharmacy, *Dean Lloyd M. Parks*, *Edward Higgins*, and *Dr. Arthur Lytle* participated in a panel discussion "Revision of Internship Program in Ohio," February 23. Student President *Steven Deedrick* presided, and Dr. Lytle served also as moderator.

Philadelphia College of Pharmacy & Science—*Dr. Grafton Chase*, Assoc. Prof. of Chemistry, talked on "Radioisotopes in Pharmacy" at Feb. meeting.

Southern College of Pharmacy—*Dr. Harvey Young*, of the History Department, Emory University, spoke on "Patent Medicine in American History," February 13.

Texas Southern—Student officers for 1958–59 are: *Jimmie Graves*, President; *Outlar Simmons*, Vice President; *Nina Hagen*, Secretary; *Fredericka Sparks*, Treasurer; and *L. V. Grant*, Parliamentarian. *Mary Ann Hudson* and *Tommie Oke* will serve as student council representatives.

University of California—30 school of pharmacy graduate students made history by being first representatives of their school to visit New York drug firms. They toured E. R. Squibb & Sons, New Brunswick; Lederle Laboratories, Pearl River; and Chas. Pfizer, Brooklyn, whose guests they were during their 7-day stay in Manhattan.

University of Colorado—Officers elected for 1959 are: *Wilson Chase*, President; *Norman Bricker*, Vice President; *Marguerite Cole*, Secretary; *Clyde Mayer*, Treasurer.

University of Kentucky—1958–59 officers elected are: *Bill L. Stover*, President; *Ray Thomas*, Vice President; *Ross E. Melton*, Secretary; *Ronald L. Moreland*, Treasurer; *Daniel E. Ryan, Jr.*, Historian; and *Donald W. Maas*, Sergeant-at-Arms. *Dr. William F. Rehberg* will continue as Faculty Adviser.

University of Minnesota—*Dr. Robert P. Fischelis*, Secretary of the APhA, addressed the student branch February 18 on "Pharmacy United." A dinner at the Students Union preceeded the program, which was attended also by members of the Northwest Branch and the Minnesota State Pharmaceutical Association.

University of North Carolina—"The Role of the Detail Man" was the title of a talk made by *Dave McGowan*, February 17.

University of Oklahoma—*Ed Brown* of Eli Lilly and Company spoke on "Duties of a Detailer" on February 10. *Charles E. Bradley* student president, participated in the 9th annual Pharmacy Seminar March 19, speaking on "Fair Trade," a subject with which he has great familiarity.

University of Rhode Island—*Dr. Leonard R. Worthen* will succeed *Dr. John J. DeFeo* as Faculty Adviser for 1959. Officers elected for this year are: *Robert Kaufman*, President; *Eugene A. Parker*, Vice President; *Rosalie A. Greenberg*, Secretary; and *Robert Ponte*, Treasurer. The following have been selected as comm. chairmen: Publicity, *Robert Roy;* Professional, *Paul Pierpaoli;* Social, *Joan M. Shobrinsky;* and Membership, *Benjamin A. Tacelli.*

University of Tennessee—*Lt. Col. John F. Summers* discussed the pharmacist's place in civil defense with members February 9, and a movie "Clinical Manifestation of Drug Addiction" was shown February 16.

University of Wisconsin—*Jerome Hensiak* reported on the senior class trip to Parke, Davis & Company and Upjohn Company, highlighting his description with slides of the trip, February 11. Officers elected for 1959–60 are: *Charles F. Barfknecht*, President; *Vernon Jones*, Vice President; *Joanne M. Murray*, Secretary; and *Paul J. Volkmann*, Treasurer.

University of Wyoming—April 18 will be the date for the Annual Awards Banquet.

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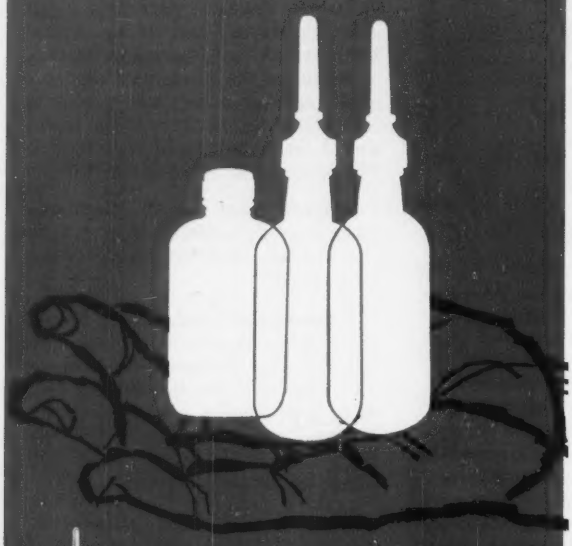

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APhA Women's Auxiliary

Student Loan Fund

Treasurer Helen Guth reports that the Auxiliary has loaned $2,550 to 9 young women attending 6 different schools of pharmacy. One loan for $400 has been completely repaid and $75 received on another. Not only is this a source of great satisfaction to the general membership, but it must be particularly gratifying to those long time members of the Auxiliary who pioneered the idea.

Pharmacy Student Wives Clubs

Mrs. Frances E. Poe, chairman of the PSWC committee, reports that a new club has been established at the University of Iowa with the following officers: Mrs. William Hansen, President; Mrs. James Waters, Vice President; Mrs. Phillip Messer, Secretary; and Mrs. James Vernon, Treasurer. Other charter members include Mesdames Charles Castor, Jeannette Daehler, Robert Griffiths, Lloyd Hansen, John Hovener, Robert Larsen, James Nelson, James Obrecht, Donald Rinehard, Walter Ronnfeldt, Alan Russett, Ray Sheldon, Marvin Shiver, Thaddens Stevens, Eugene Hickmen, and Morrel Spencer.

The PSWC of Southwestern Oklahoma School of Pharmacy announces the following recently elected officers: Mrs. Don Lackey, President; Mrs. Paul Hancock, Vice Prsident; Mrs. Ted Raines, Secretary; Mrs. Jerry Tappana, Treasurer; Mrs. William Hill, Historian; and Mrs. Elmer Ogle, Reporter. In addition they have seven new members: Mrs. Waldo Hale, Mrs. David Martinez, Mrs. Gerald Radcliff, Mrs. Ted Raines, Mrs. Charles Villines, Mrs. Robert Dishman, and Mrs. William Hill.

The South Dakota PSWC also has a new member, Mrs. R. Kersten.

We are most happy to welcome all these women and hope they will eventually become active members of the Women's Auxiliary, following their husbands' graduation.

Some membership cards sent out by Mrs. Guth have been returned to her stating no forwarding address was left. If others in your club have received theirs and you have not, please write Mrs. Guth giving her your complete name and address, the name of the school with which you are or were affiliated and your former address. Secretary Joy Plein has made an excellent suggestion in this respect—that the secretary of each PSWC send the names and forwarding addresses of all graduating seniors in her organization to either the Secretary, Joy Plein, 6233 37th Ave. N.E., Seattle 15, Washington, or Helen Guth, Treasurer, 533 Acton Road, Columbus 14, Ohio.

The secretaries are also requested to ascertain the number who expect to attend the convention in Cincinnati in August in order that arrangements may be made, if desired, to have a meeting of PSWC members. Kindly forward this information to me, at 5760 Three Mile Drive, Detroit 24, Michigan.

Hugh Mercer Apothecary Shop

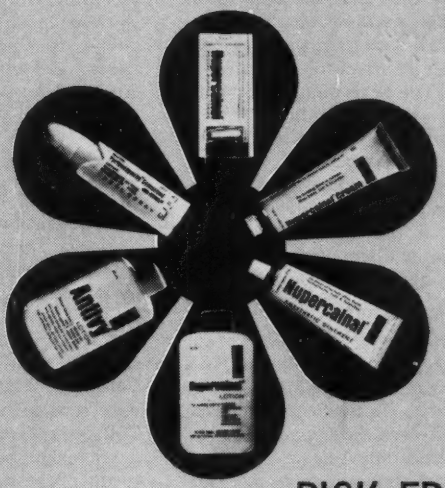
Checks were received recently from the Italian Pharmaceutical Society's ladies and the Womens Club of the Brooklyn College of Pharmacy. The generous response of these organizations is gratifying and it is hoped others will soon follow their lead.

The resignation of Mrs. Willard Calkins from the committee is regretfully accepted. Captain Calkins recently retired from the Navy and they expect to spend time travelling although still making Washington their headquarters.

A recent visit to Headquarters in Washington was most enjoyable and it was good to renew acquaintances and as always to find the entire staff so gracious and cooperative.

Dorothy M. Cusick, President
APhA Women's Auxiliary

HERE'S THE CIBA "DO-IT-YOURSELF" DEAL



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Nupercainal Ointment and **Suppositories** for hemorrhoids
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YOU make the deal to fit your own needs of these six rapid-turnover products from CIBA. Here's how it works:

6-DOZEN DEAL—44% PROFIT

1 free with 11 plus 10% discount on any of the above 6 products (maximum: 4 dozen tubes of Nupercainal Ointment in each 6-Dozen Deal order).

Prices: Nupercainal Suppositories	per doz. boxes	$8.91
All other products*	per doz. boxes	$6.60

*Nupercainal Ointment, Cream and Lotion; PBZ Compound; Antivy

Example: If you include one dozen boxes of Nupercainal Suppositories in your 6-Dozen Deal order, your cost will be	$41.91**
You sell for	75.00
YOUR PROFIT IS	$33.09

**1 (doz.) X $8.91 for the Nupercainal Suppositories;
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ALSO AVAILABLE: A 3-DOZEN DEAL—38% PROFIT

1 free with 11 on any of the above 6 products (maximum: 2 dozen tubes of Nupercainal Ointment in each 3-Dozen Deal order).

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You sell for	39.72
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The "Do-It-Yourself" Deal Period lasts 4 months . . . from March 1, 1959 to June 30, 1959.

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Current Comment

Infectious Hepatitis

The disease infectious hepatitis is caused by a virus which thrives in unsanitary environments and is transmitted by oral discharges and fecal excrement. Symptoms include fever, nausea, headache, and gastrointestinal distress. The disease can result in serious damage to the liver and ofttimes death.

No vaccine has yet been developed for this disease that is spread by man to man only. However, immune serum globulin, if administered 6 days before the onset of symptoms, offers protection for 6 to 8 weeks. Recently, a wave of infectious hepatitis struck 4 ships of the U.S. Navy's sixth fleet in the Mediterranean, an area recognized as a constant source of the disease. Well over 100 men have been hospitalized this year, with 1 life taken.

The disease usually reaches its peak in the U.S. in March. More than 600 cases a week were being reported to the U.S. Public Health Service as early as February of this year. This was more than 75% above the number of cases reported a year ago, indicating an upswing in this country, according to Dr. C. C. Dauer, Medical Adviser for the National Office of Vital Statistics. He indicates that this is probably the beginning of another cycle that will last through the next 2 years.

Unique Health Center

A unique health center for healthy persons 60 years of age and over is now being operated in Philadelphia, Pa., in an attempt to prove that senility can be prevented through the use of special techniques.

According to Dr. John J. Hanlon, Director of Public Health Service for the Philadelphia Department of Health, the staff includes recreation leaders, a psychiatrist, a psychologist, an occupational therapist, a public health nurse, a psychiatric social worker, a physician, and a clerk.

The program of the center includes group discussions, services for health rehabilitation and employment for the aged, and various forms of recreation geared to the needs of older persons.

Current Population Reports

During the period of January 1940 to January 1959, according to the U.S. Department of Commerce, there were 68,000,000 births, 28,500,000 deaths, and 4,500,000 civilian immigrants. In the last 10 years, the population of the United States has increased by 25,050,000, and during the last 20 years by 44,019,000 people.

Births exceeded the 3,000,000 mark for the first time in 1944 and passed the 4,000,000 mark for the first time in 1955. Last year was the fifth consecutive year in which births exceeded 4,000,000. The peak number of births —4,249,000—was reached in 1957.

The death rate in 1958 of 9.4 per 1,000 of the population, including Armed Forces overseas, yielded 1,648,000 deaths. The increase in the population of the United States, including net civilian immigration, is now approaching 3,000,000 per year.

Medical Discoveries

President Robert A. Hardt of the Armour Pharmaceutical Company, in a recent address, quoted an interesting conversation to illustrate the fact that many people, even those in allied industries, lack understanding of the origin and role of pharmaceuticals and pharmaceutical manufacturers in serving the health professions. The conversation went something like this:

"You know, I don't think doctors ought to prescribe commercial drugs at all."

"But all drugs are made by some commercial firm or other."

"Yes, but they aren't all sold under fancy names in fancy packages. . . at fancy prices. Surely it's wrong to make a profit out of illness?"

"But if the pharmaceutical manufacturers didn't make profits, where would they get the millions of dollars they spend every year on doing research to find other drugs that are very badly needed?"

"But I thought most of the new drugs had been discovered by doctors working in the big hospitals!"

"Not at all. Most new drugs and anesthetics have been discovered and perfected by the pharmaceutical industry . . . in other words, by the very people who make them."

Psychic Murder

According to Dr. Joost A. M. Merloo, a New York psychiatrist, many people commit suicide because they are literally driven to it by someone with whom they identify themselves—often friends or relatives. He says that punishment by parents, spouses, or bosses is one of the most frequent causes of suicide and can be considered a form of mental blackmailing.

The burden of inadvertant hostility and murderous wishes can push those persons with weak egos into depression, resulting in suicide. It is as if the suicide said, "You will be sorry when I'm gone."

Dr. Merloo related his concept of psychic homicide to that of brainwashing in which the person is made by another to believe, say, and do things that he, himself, would not ordinarily do. "Especially in suicide by children," according to the psychiatrist, "we realize how much rejection, teasing, and vituperation have to do with loss of self-esteem, and how these humiliations can drive a young person to suicide."

Student Loans

U.S. Commissioner of Education Lawrence G. Derthick has allocated $6,000,000 of Federal funds, the total amount thus far appropriated under the National Defense Education Act, to student loans. This Act was signed by President Eisenhower last September 2.

A total of 1,227 colleges and universities in all 49 states, the District of Columbia, Hawaii, and Puerto Rico have received student loan allocations. College students and high school graduates wishing to obtain loans may apply to any of the institutions to which funds have been allocated. Each institution will handle its own student loan fund and must select the individuals who will be granted loans to enable them to continue their education. Special consideration must be given to students with superior academic backgrounds who intend to teach in elementary or secondary schools or those whose academic background indicates superior capacity or preparation in some science, mathematics, engineering, or modern foreign language.

Half of each student loan will be cancelled for 5 years of full-time teaching in a public elementary or secondary school at the rate of 10% for each year of such service. Each educational institution administering a student loan fund is obligated to contribute to the fund at least $1 for every $9 of Federal money. The maximum loan to a student is $1,000, but most loans made will be less than this amount.

The Philadelphia College of Pharmacy and Science received an allocation of $2,327, and Ferris Institute received $5,333.

All schools are under pressure to find adequate funds for student loans, but the general viewpoint is that students ought to be encouraged to help themselves through school by the loan program, thus ending complete support via the scholarship program. Many schools will not award scholarships based on need unless the applicant also applies for a loan.

Apparently many pharmacy colleges could take advantage of the loan program but have not done so.

Editorial

The Age of Fear

Everywhere we go lately we find people from all walks of life filled with apprehension. Anyone these days who claims he has not been affected either directly or indirectly by some type of fear is either untruthful, stupid, or mentally defective. People everywhere are fearful that they are going to be sick. They are afraid that they are going to be criticized. They are afraid that they are going to be poor. They are afraid they are going to lose someone's love. They are afraid they are going to die.

Industry is afraid Government is going to take over, and Government is afraid industry will ruin its opportunities for expansion. Politicians are afraid they are not going to be re-elected, and constituents are afraid their representatives are crooks. Employers are afraid their employees are not loyal, and employees are afraid their faith in their employers is misplaced. Wives are afraid their husbands cannot be trusted, and husbands are afraid their wives are not faithful. Bacteria, disease, infection, pain, height, darkness, drowning, and death are a few of the more common sources of fear. There are literally hundreds of phobias, and a few are found to some extent in many apparently "normal" human beings.

Causes of Fear

All this fear is a reflection of the underlying tensions and insecurity created by the world-wide frictions among powerful nations. Discussions are heard daily about guided missiles, about spying satellites, about A-bomb and H-bomb threats, about the destructive effects of radioactive fallout, about all sorts of hazards and possible disasters.

Especially fearsome are the new types of health hazards mankind faces in the form of air pollutants, water contaminants, resistant organisms which cause new diseases, disease-bearing insects, increasing stresses which cause mental diseases, and unknown agents causing diseases such as cancer.

The pathetic aspect of this whole crazy picture is that almost all fear is unnecessary. It is largely the result of widespread, irrational thinking caused by mental and physical ill health resulting from tensions. A large percentage of the world population is emotionally upset by it all. They lean on the few stalwarts who in their maturity and wisdom have developed perspective. These are the few who when asked the age-old question "If you were planting an apple tree and suddenly were led to believe that you had only 5 more minutes to live, what would you do?" would reply instantly and with sincere determination, "I would keep on planting the tree!" Such fearless men promote stability and encourage progress in a complex, anxious world.

What Pharmacy Is Doing

Now where is Pharmacy fitting into this picture? Our profession can be very proud indeed of what it is doing to combat fear. In the first place, it has made remedies available which have cut the mortality rate of once-dreaded diseases to practically negligible proportions. Man no longer fears diseases such as plague, diphtheria, and pneumonia which once struck terror into the heart of a victim because his chances for survival were so low. Pharmacy has also created psychopharmacological agents—the tranquilizers to calm those who are abnormally excited and the psychic energizers to create enthusiasm and pride in those who are depressed.

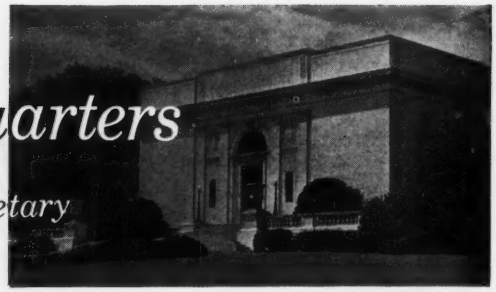
One of the noblest callings open to man is to take part in promoting human health and welfare. Pharmacists do their part by creating drugs to fight mental and physical diseases. They prepare suitable dosage forms for administration of the drugs and distribute the medication where it is needed in the offices, homes, and hospitals of the world. Millions of people who are leading active lives today would be dead or incapacitated if it were not for Pharmacy's products.

Team Work Needed

But Pharmacy can make only part of the contribution that is needed. We must have physcians who are expert diagnosticians, capable of prescribing proper treatment, and both pharmacists and physicians must have faith in a Higher Power which functions through them. Two years ago, Dr. David B. Allman stated the thought beautifully in his inaugural address as President of the American Medical Association when he said:

> In this troubled world today the physician perceives the need for a new revolution—a revolution against opportunism, expediency, and materialism—a return to the original American ideas of freedom, personal responsibility, individual initiative, and above all faith in God.

Straight from Headquarters



Robert P. Fischelis, Secretary

Warning Statements for Drug Labels

The long awaited compilation of proposed label warning statements, to be issued by the Federal Food and Drug Administration under the provisions of the Federal Food, Drug, and Cosmetic Act, was made available on March 26 through the *Federal Register*. We are supplying, by direct mail, a copy of these proposed warnings to every member of the AMERICAN PHARMACEUTICAL ASSOCIATION for information and comment. Sixty days from March 26, 1959 are allowed by the Commissioner of Food and Drugs for interested persons to submit their views in writing to the Hearing Clerk, Department of Health, Education, and Welfare, Room 5440, 330 Independence Avenue, S.W., Washington 25, D.C., on the proposed order setting forth proposed label warning statements.

The following paragraphs are taken from a statement released by the Food and Drug Administration in connection with the publication of these proposed warning statements:

"The FDA compilation is published as a proposal to provide opportunity for comment on the suggested wording of warnings not previously published. For convenience in bringing together all types of label warnings, the compilation includes specific warnings required by law or regulations. FDA emphasized that publication of the list as a proposal does not affect the necessity for compliance with the requirement that drugs be labeled with adequate warnings.

"FDA's Deputy Commissioner John L. Harvey pointed out that except where the wording of a warning is specified by law or by regulation or by an effective New Drug Application, it is the drug manufacturer who is responsible for choosing the wording of the warning. Mr. Harvey said that the suggested warnings published on March 26 merely state what FDA considers to be one way of complying with the law.

"FDA said the new compilation should be helpful to any drug firm planning to begin distribution of an over-the-counter drug not previously in its line, and should make it easier for all drug firms to review their labels, change those appearing not to meet legal requirements, and avoid possible future litigation.

"In publishing the proposed warnings FDA emphasized that they do not cover all over-the-counter drug products subject to label warning requirements. Additional warning or caution statements may be necessary. The FDA will continue to advise individual manufacturers on specific labeling questions.

"The compilation includes over 100 suggested warnings for an extensive list of drugs, including those for animal use, and several therapeutic devices. Although many of these warnings have not previously been published by FDA, they have been disseminated via trade correspondence and informal contacts with trade representatives seeking pre-marketing advice on labeling. Some have been announced in statements of policy or interpretation."

It has been made clear by officials of the Food and Drug Administration that the kind of comment they seek with respect to the proposed label warnings should deal with the "medical or pharmacological facts concerning the various products." It should also be noted that any of these warnings which are required by law or have been fixed by previous regulations are not open to comment in the same sense as the proposals which have not been previously published or may be considered as relatively new.

Pharmacists who contact persons purchasing drugs over the counter may have suggestions to offer as to the adequacy of the proposed label warnings, based on the reactions of purchasers who are unfamiliar with the drugs they have been persuaded to buy for self medication.

The Food and Drug Administration has let it be known that it does not intend to become involved in any controversy with respect to the place where a drug is sold over the counter or with respect to the qualifications of the seller.

Special committees and consultants of the AMERICAN PHARMACEUTICAL ASSOCIATION and members of its professional staff are studying these proposals and their implications. The ASSOCIATION will file with the Department of Health, Education, and Welfare a statement embodying recommendations with respect to some of the proposed label warnings. Any member who has suggestions to offer on this important subject is earnestly requested to send them to the Secretary of the APhA, 2215 Constitution Avenue, N.W., Washington 7, D.C., not later than May 15, 1959, so that they may be given due consideration for possible inclusion in the ASSOCIATION's statement which must be filed by May 26, 1959.

Support the Cancer Program

As is well known, April has been designated as the month in which the American public is to be intensively educated on the importance of early diagnosis of cancer. It is estimated that two hundred and fifty thousand people in the United States die each year from cancer. It is the second leading cause of death in the United States, surpassed only by heart disease.

In the continuing program which is conducted by the AMERICAN PHARMACEUTICAL ASSOCIATION in cooperation with the pharmacists of the United States, under the general heading "Your Pharmacist Works for Better Community Health," cancer has a very important part.

Right now there is a special committee of the ASSOCIATION working with those who are in charge of cancer education in the American Cancer Society, developing a program designed to determine whether practicing pharmacists are well enough informed on cancer control to assist in case finding and in guiding those needing attention into channels which will be most helpful to them.

As the American Cancer Society develops its program during the month of April, all of us should aid personally in giving it financial and moral support, and every effort should be made to impress upon the public the need for making some contribution to this program, because one never knows where cancer may strike.

Out of the joint educational effort between the American Cancer Society and the APhA, there should evolve a program of better cancer education for practicing pharmacists. There should also come information on which faculties of colleges of pharmacy will be in a position to determine to what extent education in this field should be expanded in the curriculum of schools of pharmacy. The aim is to turn out a future group of pharmacists who are well grounded in the various aspects of the cancer problem, and thus prepared to be of service in their many contacts with the public. Cooperation of pharmacists and educators in these endeavors is strongly urged.

We Endorse Fair Trade Legislation

The AMERICAN PHARMACEUTICAL ASSOCIATION has long been on record in favor of state and Federal laws against predatory price cutting, loss-leader selling and other devices which promote unfair competition. H.R. 1253 introduced by Congressman Harris has been endorsed by the ASSOCIATION. On March 26 President Louis J. Fischl filed a statement in support of this legislation for incorporation in the record of the public hearing on this bill, conducted by the Committee on Interstate and Foreign Commerce of the House of Representatives. In this statement, President Fischl pointed out that our ASSOCIATION believes that the principle of *caveat emptor* has no place in the environment of public health; and no health institution in our country is visited more frequently than the American pharmacy or drug store. Geographically, the vast majority of these health service centers are located in rural communities and in the neighborhood shopping centers of urban areas. They are strategically located to serve the convenience and emergency health needs of the American family. The professional, as well as the economic, success and continued availability to the public of these pharmacies or drug stores depends on the satisfaction of a steady patronage to whom quality products and honest service are offered at a reasonable price.

"We desire to call to the attention of the Committee," said Mr. Fischl, "that the Federal enabling laws (Miller-Tydings Act and the McGuire Act) and state statutes concerned with resale price maintenance, have generally been an effective and accepted solution to this basic problem. Due to a possible breakdown of these safeguards, which has been experienced in some areas, we believe that the Congress should recognize and support the established principles of fair trade by positive action in order to preserve reasonable and honest competitive practices in the retail environment. Since we do not believe that any more constructive proposals to this end have been offered, we respectfully urge that your Committee approve H. R. 1253, which represents the most constructive attempt of which we are aware to remedy a situation that is clearly detrimental to the public interest."

Manufacturers Add Medical Leadership

Word comes to us from Boca Raton, where the Pharmaceutical Manufacturers Association is holding its annual meeting (April 1–3) that Dr. Austin Smith, former Editor of the *Journal of the American Medical Association*, has been elected president of this Association. This is a new departure for the association of manufacturers of prescription products which was recently organized by merging the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers' Association.

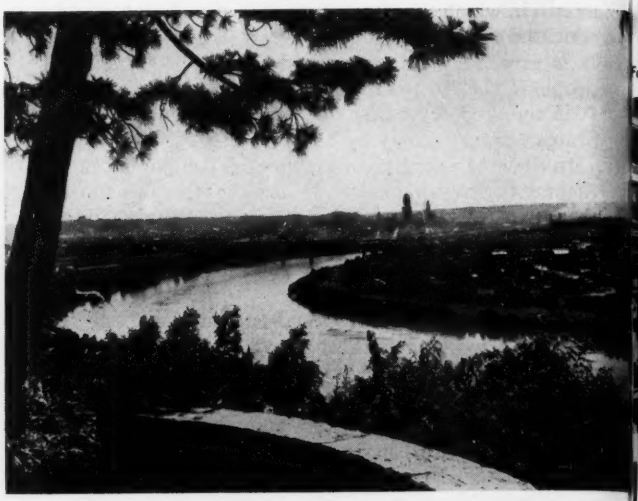
As we understand it, Dr. Smith will be the full-time, paid, chief executive officer of the association and will direct its destinies with the cooperation of a board of directors or an executive committee elected by the membership.

This dramatic departure signifies a recognition on the part of the membership of the PMA that leadership in the development of pharmaceutical products should be shared by the medical and pharmaceutical professions. It is true, of course, that the production and distribution of drugs in this day and generation involve the techniques of "big business." However, unlike ordinary "big business," this particular industry deals with potent drugs which can save or impair and even destroy human lives. The responsibility that goes with this kind of an industry cannot be assumed completely by businessmen. It must be guided in its development by men who have an appreciation of the potentiality of medical, pharmaceutical, chemical, pharmacological, and other scientific research as the basis for exploring the cause, amelioration, and cure of disease.

Leaders in the drug industry who have a background of scientific training have done excellent work in promoting the development of new drugs. It is to their credit that they are now recognizing the importance of getting back to first principles in formulating the ethics and public relations required to continue to inspire confidence in their public health mindedness.

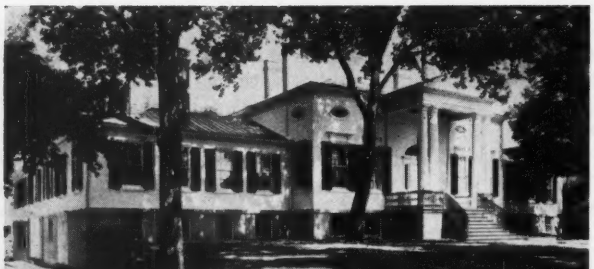
The somewhat radical departure in selecting a physician, who has not grown up in or been previously associated with industry, to act as their leader is a most significant development in the progress of the PMA which, we believe, will merit general approval.

Skyline of the City of Cincinnati showing bend in Ohio Riv

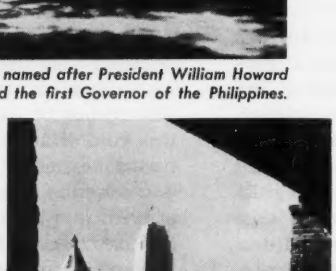


The stone and brick Cincinnati Art Museum holds two floors of exhibits and art library.

Cincinnati, 1959



[The Taft Museum of Cincinnati is named after President William Howard Taft born in 1857 and the first Governor of the Philippines.



Cincinnati skyline from suspension bridge.

SOME HIGHLY IMPORTANT, even crucial problems will be considered during the Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION this year. The whole future of Pharmacy may be strongly affected by some of the discussions and decisions which will be made at that time, as the Secretary and General Manager of our Association retires and the reins of office pass into new hands. The General Sessions will unquestionably be well attended, and extended discussion, sometimes heated debate, is expected on the issues of today: recruitment for Pharmacy, Association membership, legislation in the health field, drug distribution, professional and public relations, military pharmacy, etc.

The site of the APhA Convention this year is Cincinnati, "Queen City of the West," which was first established in 1788 as Columbia on the banks of the Ohio River. Its fabulous history, covering almost two centuries, provides an interesting and variegated background for national meetings. This, the birthplace of Presidents William Howard Taft and Rutherford B. Hayes, offers many unusual and outstanding attractions.

Because the time of the meeting, August 16–21, falls at a season of the

Fountain Square, in the heart of downtown Cincinnati, is a busy area.

A night view of the Tyler Davidson Fountain.

APhA convention site

year when a large percentage of APhA members take their vacation and because it is so conveniently located at the crossroads of the Nation, many members will combine business with pleasure to attend the convention with their families.

Only three APhA conventions have been held in Cincinnati since the founding of the Association in 1852. These were held on July 25, 1854, on September 21, 1864, and the last on September 5, 1887. Just a few months after the last meeting in Cincinnati, on December 12, 1887, the Certificate of Incorporation of the APhA was signed.

The city has been part of the vivid and contrasting scenes of a rapidly growing young nation. Historical writings tell of Indians and smallpox epidemics fought by wild, tough, sometimes murderous pioneers, river boats, music and dancing, drinking and brawling, and horse-drawn trolleys. It was a frontier town which eventually became one of the major escape routes for slaves from the South.

At the time of the last APhA Convention in 1887, crude, unmannerly, boisterous, and indelicate behavior on the part of some citizens has been described. Yet on the other hand, it is recorded that Cincinnati was at that time "a city of music and laughter, beer gardens and dance halls, vaudeville stages and street parades. It was a socially "wet" city before the prohibition era. Vine Street was the gay white way, with over 200 drinking places in a 2-mile stretch."

The recipes for the wonderful food of those early days, introduced by the thousands of Irish and Germans who flocked to the city at the time of the last APhA Convention there, have been handed down generation after generation. Many restaurants still pride themselves on the excellent sauerbrauten, potato pancakes, pig's knuckles, goulash, and dumplings. The food has always been served with music of great variety—such great variety that all tastes were satisfied—ragtime, Irish melodies, Beethoven, Strauss waltzes, and sweet ballads. Even well after the turn of the century, husky baritones and buxom sopranos held forth.

Now Cincinnati has grown into a prosperous, modern metropolis of a million residents with plants manufacturing a wide spectrum of products, including pharmaceuticals, soaps, chemicals, fine instruments, food products, textiles, automobiles, iron and wood products, leather goods, and heavy machinery. It is literally in the center of the U.S. industrial world, with 40% of the Nation's population within a 350-mile radius. Its 21 airports, 7 railroads, its river, and its good highways bring the Nation to its doorstep, making it one of the leading convention cities of the country.

The University of Cincinnati, Xavier University, Institutum Divi Thomae, and a large medical center will be of interest to members of the Association. The symphony orchestra, the first conductor of which was Leopold Stokowski, is also a famous attraction, and the Cincinnati Art Museum, which was opened in 1886 a year before the last APhA Convention in Cincinnati, will be of interest to many.

Although there are many local attractions, a heavy attendance is expected at the scientific and professional meetings of the seven APhA Sections and the six related and affiliated National Societies, which will meet concurrently.

A registration form is provided on the next page. It should be filled out promptly by all who wish to attend the meeting and mailed to the APhA Housing Bureau as directed so that accomodations will be reserved. In an early issue of THIS JOURNAL a complete program will be published.

HOTEL RESERVATION FORM

1959 CONVENTION

American Pharmaceutical Association

August 16–22, 1959 — Cincinnati, Ohio

The Netherland Hilton Hotel has been designated as APhA Headquarters. All meetings, unless otherwise specified, will be held at the Netherland Hilton. Other hotels included in the list below are located nearby.

No Reservations Will Be Accepted Directly by the Hotels
Please Use the Following Form in Making All Requests for Reservations

Mail this request to: APhA Housing Bureau, 714 Union Central Building, Cincinnati 2, Ohio

Please make hotel reservations as shown below:

HOTEL_____ First choice
HOTEL_____ Second choice
HOTEL_____ Third choice
HOTEL_____ Fourth choice

Number of room(s) with bath_____ Double room(s) Rates requested $_____ to $_____
_____ Twin bedroom(s) Rates requested $_____ to $_____
_____ Single Room Rates requested $_____ to $_____
_____ Suite(s) Rates requested $_____ to $_____

Date and hour of arrival _____ **Date of departure**_____

If necessary to change or cancel reservation please notify the Housing Bureau at once.

The Name of Each Hotel Guest Must be Listed Below

Please PRINT names of all persons for whom room reservations are requested, indicating occupants of EACH single, double, and twin bedroom. OTHERWISE APPLICATION WILL HAVE TO BE RETURNED FOR COMPLETION.

_____ _____
_____ _____
_____ _____
_____ _____

Confirm reservation to:_____

Address:_____

Hotel Rates

Hotel	Single	Double	Twin Bed	Suites
Netherland Hilton 5th & Race Sts.	$6.50–$13.00	$12.50–$15.00	$13.00–$19.00	$29.50 and up
Terrace Hilton 15 W. 6th St.	$12.25 and $18.25		$16.50 and $22.50	
Sheraton-Gibson 421 Walnut St.	$5.85–$13.00	$9.85–$16.00	$11.50–$18.50	$27.50 and up
Broadway 4th and Broadway	$7.00	$10.00–$12.00	$10.00–$12.00	
Metropole 609 Walnut St.	$6.00–$8.50	$9.00–$12.00	$9.50–$15.00	
Sinton 4th & Vine Sts.	$6.00–$11.50	$9.50–$14.00	$11.50–$15.00	$20.00 and up

by Joseph Schradie, Pharm.D.
and Orville H. Miller, Ph.D.*

A simple approach to the filling of

ophthalmic prescriptions

SINCE the Federal Food and Drug Administration ruling in January, 1953 concerning the sterility and preservation of ophthalmic solutions,[1] there has been an increased emphasis placed upon efforts to eliminate contamination in the filling and dispensing of ophthalmic solutions. The need for sterility in ophthalmics has resulted in the recommendation of a number of procedures such as use of bacterial filters, Steri-Rx Chambers, and sterilization by autoclaving.[2,3] However, these methods have not been accepted to any degree by the retail pharmacist. Many pharmacists are still dispensing common ophthalmic medicinals without preservatives, the vehicle oftentimes being either tap water or aged distilled water. Lawrence[4] and Theodore[5] consider these to be the chief sources of contamination especially with *Pseudomonas* and *Proteus*.

In addition to sterility and preservation of ophthalmic solutions, the pharmacist is confronted with the problems of isotonicity and its calculations; buffer requirements and proper pH adjustment. Therefore, it can be stated that the pharmacist is confronted with four considerations when filling or dispensing an ophthalmic prescription.

1. Sterilization and preservation
2. Isotonicity and the calculations involved
3. The proper buffer and pH control
4. Filtration

These are problems faced by every pharmacist when he dispenses ophthalmic solutions, but which are frequently ignored because of nonfamiliarity with the calculations, techniques, and equipment usually recommended. The purpose of this paper then is to reevaluate present procedures and methods and as an end result come forth with recommendations which will be more acceptable and practical to the average pharmacist.

Sterilization and Preservation

One preservative that has received a considerable amount of attention is benzalkonium chloride. The common use concentration for ophthalmic solutions is 1:10,000. However, Riegelman et al[6] found *Ps. aeruginosa* still thriving after 3 days' exposure to a 1:500 solution. It was also pointed out that in some instances the bacteria were detectable for several weeks when exposed to lesser concentrations and on occasion were multiplying. As a rule, quaternary ammonia compounds are effective against both Gram-positive and Gram-negative organisms, but higher concentrations are required for the latter. According to the NNR[7] they are neither fungicidal, sporicidal, nor virucidal. According to the Council of Pharmacy and Chemistry of the AMA "strains of *Pseudomonas aeruginosa* and *Mycobacterium tuberculosis* are particularly resistant to these agents"[8] and L. Hogan[9] has reported ocular damage resulting from benzalkonium chloride solutions. Benzalkonium chloride is chemically incompatible with most

* Presented to the Section on Practical Pharmacy, APhA Los Angeles Convention, April 1958. From the University of Southern California, Los Angeles 7, California.

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[1] *Federal Register*, No. 11, **18**, 351(1953).
[2] Goldstein, S. W., THIS JOURNAL, **14**, 498 (1953).
[3] Parrott, E. L., Wurster, D. C., and Busse, L. W., THIS JOURNAL, **14**, 645(1953).
[4] Lawrence, C. A., *J. Am. Pharm. Assoc., Sci. Ed.*, **44**, 457–464(1955).
[5] Theodore, F. H., and Feinstein, R. P., *Am. J. Ophthmol.*, **35**, 656.
[6] Riegelman, S. D., Vaughan, D. G., Jr., Okumoto, M., THIS JOURNAL, **16**, 742(1955).
[7] *New and Nonofficial Remedies*, Council of Pharmacy and Chemistry of A.M.A., Chicago, 1956, p. 59.
[8] *New and Nonofficial Remedies*, Council of Pharmacy and Chemistry of A.M.A., 1958, p. 161.
[9] Hogan, J. M., *Calif. Med.*, **71**, 414(1949).

DR. ORVILLE H. MILLER, Professor of Pharmacy, University of Southern California School of Pharmacy since 1953, received his B.S. (1938) and M.S. (1940) degrees in Pharmacy and his Ph.D. (1945) from the University of Washington. He was chemist with the FDA (1941–47), research chemist for Consolidated Dairy Products at Seattle (1947–1950), and in 1950 became Assistant Professor at USC. Dr. Miller is a member of the APhA, the ACS, and the ASHP.

anionic substances such as nitrates, salicylates, maleates, and proteins. It is however compatible with some phosphates, carbonates, and chlorides.

A group of preservatives frequently used are the mercurials, phenylmercuric nitrate enjoying the greatest use. Phenylmercuric nitrate has been reported to have little effect in the presence of proteins.[10]

At the usual use concentration of 1:25,000 phenylmercuric nitrate or acetate is incompatible with the several alkaloidal hydrobromides often prescribed in ophthalmic solutions. The phenylmercuric cation is also incompatible with high molecular weight anions such as the penicillins and fluorescein. On standing in sunlight or in alkaline solution, or with reducing agents decomposition occurs. Excessive decomposition is always noted by liberation of mercury metal.[8] Thiomerosal is incompatible with the many cationic acidic salts used in ophthalmology and is useful only in neutral or alkaline solutions such as sodium fluorescein solution.

One of the oldest and best preservatives at the present time is chlorobutanol. Chlorobutanol has few incompatibilities because of its nonionic nature. Solutions will decompose if kept on the basic side or if heated above 65°C. for any length of time. Chorobutanol can be used for most ophthalmic solutions, including sodium fluorescein, in spite of frequent statements to the contrary.[5] The low total alkalinity of sodium fluorescein does not produce any appreciable decomposition of chlorobutanol. Trace decomposition of chlorobutanol tends to neutralize the faintly alkaline solution. In the author's experience little or no pH change and no precipitation was noted in solutions on standing at room temperature for periods of up to six weeks. The fact that chlorobutanol is effective against the usual pathogens appears to be well established according to Theodore.[5] Various concentrations have been used ranging from 0.1–0.5%. McCullough[11] reports that a 0.3% solution of chlorobutanol was necessary to prevent growth of cultures of *Ps. aeruginosa*. However, the most effective concentration appears to be 0.5% as was reported by Feinstein and Theodore,[5] Elkin[12] and Gershenfeld.[13]

The ability of 0.5% chlorobutanol to resterilize Pseudomonas contaminated solutions has been recently studied. Riegelman et al,[14] and Lawrence,[4] using a heavy inoculum (0.5 ml of a 24-hour broth culture per 5 ml of test solution) found that 3 to 8 hours was usually required for resterilization with several strains requiring 24 to 48 hours. Elkin[12] and Friedman[15] found that reduction in size of inoculum to amounts more in keeping with probable contamination during use also substantially reduced the time required for resterilization. Friedman found all of 36 samples of ophthalmic solutions, preserved with 0.5% chlorobutanol and in actual ward and clinic use, to be sterile and recommends use of 0.5% chlorobutanol as a chemical sterilizing agent for such solutions. Of sixteen similar samples preserved with 1:10,000 benzalkonium chloride, two were found to be nonsterile.

Gershenfeld[16] reported the activity of chlorobutanol was lost on heating. Elkin[12] found quite the opposite and suggested that Gershenfeld's findings resulted from loss of chlorobutanol by volatilization from unsealed containers.

pH Control and Buffers

Possible irritation caused by acidic or alkaline ophthalmic solutions cannot be judged by the pH of the solution, but rather by the combined total acidity or alkalinity of the solution including that of any buffers. The use of buffers does not reduce the total acidity or alkalinity of the solutions, but increases it and would add to the irritation rather than minimize it. In the authors' experience, an isotonic solution of 0.001*M* HCl of pH 3.0 is not irritating while isotonic phosphate and acetate buffers of approximately 0.1*M* concentration and a pH 5.0 are distinctly irritating. One of the most popular "buffered" ophthalmic vehicles is an isotonic boric acid solution with a pH 5.0. This solution enjoys its popularity, not because of its assumed buffer properties, but because of its freedom from irritation resulting from an almost total absence of buffer capacity. Boric acid with a pK_a 9.2 cannot be expected to have any appreciable buffer action except in the pH range of approximately 7.5–11.

The phosphate buffer at near physiological pH values is nonirritating but may lead to deterioration of certain drugs by maintainance of too high a pH value due to its buffer action. These same drugs in an unbuffered solution would establish a pH level more conducive to drug stability. Furthermore, phosphate buffers may reduce the effectiveness of preservatives presumably because of its nutritive value.

The irritating properties of free alkaloidal bases have been discussed by Hind and Goyan.[17] Improper use of buffers could lead to irritating concentrations of the free base form of alkaloidal drugs. Unmodified solutions of salts of alkaloidal bases contain no free base and are mildly acidic in solution, but have a very low total acidity which results in minimum irritation. Furthermore, such drugs are usually most stable in the weakly acidic solutions produced by their salts.

On this basis, an ophthalmic vehicle need not be buffered, as the ophthalmic medication will establish its own optimum pH. Either isotonic sodium chloride or boric acid solutions meets this condition. However, in the author's experience certain drugs such as pilocarpine salts are found to be quite irritating in isotonic boric acid, but not in isotonic sodium chloride for reasons not yet determined.

Isotonicity

Swan[18] in 1949 reported that discrepancies in sodium chloride equivalents of tear secretions are due to the fact that the tears are not chemically or physically constant. In studies by Hind and Goyan[19] it was shown that the eye has wide tolerance to osmotic changes in sodium chloride concentrations with 0.5% as the lower limit of tolerance and 1.5% as the recommended upper limit.

In a more recent study by Riegelman *et al.*[6] a 0.9% sodium chloride was placed in one eye and a hypotonic solution in the other eye. It was stated by these researchers that in the range from 0.5–2.0% sodium chloride no pain was exhibited in either eye, nor did a slit lamp examination indicate any cellular damage.

In 1954 Grosicke and Husa[20] reported some hemolysis of blood cells in 0.54% sodium chloride and complete hemolysis at 0.36%. The sodium chloride equivalent (E) for many ophthalmic drugs at use concentrations in water are in this range or lower and therefore are not within acceptable osmotic limits. These same concentrations in an isotonic vehicle would provide hypertonic solutions, but still within acceptable upper limits.

The following calculations further illustrate the osmotic properties of solutions of drugs dissolved in water and in isotonic sodium chloride:

Acceptable osmotic range 0.5–2% NaCl

a. Sat. boric acid $5 \times .47 = 2.35\%$ NaCl

[10] Current Comment, *J. Am. Med. Assoc.*, **122**, 414(1949).

[11] McCullogh, J. C., *Arch. Ophthmol.*, **29**, 924(1943).

[12] Elkin, E., *Master's Thesis*, University of Southern California, "Chlorobutanol as a Preservative in Ophthalmic Solutions," p. 61, (1956).

[13] Gershenfeld, L., and Tompkins, D., *Am. J. Pharm.*, **111**, 385(1939).

[14] Riegelman, S. D., Vaughan, D. G., Jr., Okumoto, M., *Arch. Ophthmol.*, **54**, 725(1955).

[15] Friedman, D., *Master's Thesis*, Univ. of Southern Calif., "Chemical Sterilization of Ophthalmic Solutions" (1958).

[16] Gershenfeld, L., *Am. J. Pharm.*, **124**, 363 (1952).

[17] Hind, H. W., and Goyan, F. M., *J. Am. Pharm. Assoc., Sci. Ed.*, **36**, 33(1947).

[18] Swan, K. C., *Arch. Ophthmol.*, **41**, 253(1949).

[19] Hind, H. W., and Goyan, F. M., THIS JOURNAL, **12**, 732(1950).

[20] Grosicke, T. S., Husa, W. J., *J. Am. Pharm. Assoc., Sci. Ed.*, **43**, 632(1954).

b. Atropine sulfate 1% in water $1 \times .14 = 0.14\%$ NaCl in normal saline $0.14 + .90 = 1.04\%$

c. Pilocarpine HCl 5% in water $5 \times 0.22 = 1.10\%$, in normal saline $1.10 + .90 = 2.0\%$

In the last example, the E value of the final solution is still less than that of Saturated Boric Acid. Therefore the use of Isotonic Sodium Chloride as a vehicle brings most ophthalmic prescriptions within acceptable osmotic limits without any need for isotonic calculations, since the E value[6] for most commonly prescribed ophthalmic drugs is small.

Filtration

Unless the proper filter is used and proper procedure executed, more particulate matter will result than originally present.[6] In the authors' experience, solutions prepared with a clear solvent gennerally do not require filtration and this step may frequently be ommited. Consideration of the various factors as outlined previously lead to the following recommendations for a simple minimum procedure for dispensing ophthalmic solutions:

Recommended Procedure for Dispensing Ophthalmic Medication

1. Prepare ophthalmic vehicle by adding 5 grams of chlorobutanol to one liter of normal sterile isotonic sodium chloride (Sodium Chloride for Injection USP XV). Solution can be readily effected by allowing to stand for several days with occasional shaking. Filter if not clear.

2. Transfer vehicle to clean one-pint dispensing bottles with "pour top" and large screw cap coming well down over the top of bottle (many proprietary liquids are contained in such bottles and empties are readily available and suitable after thorough washing).

3. Weigh drug and dissolve in required quantity of ophthalmic vehicle (use freshly cleaned glassware rinsed with ophthalmic vehicle). Filter if not clear.

4. Dispense finished solution in dropper bottle previously rinsed with ophthalmic vehicle.

It is not the intention of the authors to discredit the use of more elaborate and careful techniques and the use of isotonic calculations. These are to be preferred. The above procedure is proposed as a minimum acceptable pharmaceutical practice. Its simplicity should encourage its adoption even by the less skilled pharmacist who has failed to accept more elaborate recommendations. ■

Poison Control Information

Highly useful poisoning information is now being disseminated by the Arizona Poisoning Control Information Center at the College of Pharmacy, University of Arizona, Tucson. Consultants to the center are Dr. Willis R. Brewer, Dean; Dr. Albert L. Picchioni (program director); Lincoln Chin; and Lloyd E. Burton. Recent information released follows:

Clinitest Tablets—Recently 2 cases of accidental ingestion by children under 5 years of age of Clinitest tablets were reported. In each case, a single tablet was ingested and esophageal stricture resulted. In one case, the stricture was complete and surgical intervention was required.

Clinitest tablets contain anhydrous sodium hydroxide, copper sulfate, citric acid, and sodium bicarbonate. If a tablet is ingested, the heat produced when the sodium hydroxide comes in contact with moisture and the caustic action of the lye can cause a thermal and chemical burn with resultant scarring and stricture of the esophagus. These effects are probably augmented by the astringent and irritant qualities of the copper sulfate.

Esophagrams should be carried out to confirm the clinical impression of esophageal stenosis or stricture. If the patient has contact with a diabetic and no etiology is apparent, ingestion of Clinitest tablets should be considered.

Philodendron Dermatitis—Some species of the popular house plant philodendron have been found to cause skin eruptions according to a recent article by Ayres, in the AMA *Archives of Dermatology*, **78,** 330(1958).

Toluene Vapors—Eight incidents of intentional inhalation of toluene vapors from a commercial plastic cement involving teen-age boys in Phoenix, Arizona, have been reported. A portion of the contents of a tube of cement was squeezed in a handkerchief and then the vapors inhaled after placing the cloth over the face. One of the youths, who was encountered shortly after he inhaled the vapors, was found to be in a condition resembling inebriation. He was incoherent and staggered. The systemic effects of the vapors lasted for approximately one hour, after which time he had apparently recovered from all effects with the exception of a headache. Exposure to toluene vapors is known to produce a transient euphoria, in addition to other effects such as giddiness, vertigo, headache, and ataxia. Although toluene does not produce the degree of bone marrow inhibition as does benzene, it may produce a mild macrocytic anemia.

Double S Saniside—A young adult male accidentally took into his mouth about 30 ml. of Double S Saniside Disinfectant, a quaternary ammonium compound N-alkyl-(C_{14}, C_{12}, C_{16}) dimethyl benzyl ammonium chloride. Although he quickly spit out the liquid, some 3 hours later he experienced respiratory difficulty because of severe laryngeal edema. Tracheotomy was avoided through the use of Solu Cortef intravenously and Cortisone suspension intramuscularly.

Snake Bite—The Center points out that instructions for the use of antivenin have been revised. All reference to the use of incisions at the site of the fang puctures and areas of swelling and application of suction has been deleted from the new instructions to conform to present clinical thinking, and neutralization of the venom with antivenin in adequate dosage is the only measure recommended.

Statistics of Poisoning Cases Reported in Arizona for 1958[1]

	Cases
Age	
Under 5	506
6–15	39
16–30	77
31–45	54
Over 45	42
Unknown	23
Nature	
Accidental	647
Intentional	93
Unknown	1
Outcome	
Recovery	734
Fatal	4
Unknown	3
Time	
6 a.m.–noon	210
Noon–6 p.m.	267
6 p.m.–midnight	153
Midnight–6 a.m.	22
Time not reported	89
Agent	
Aspirin preparations	196
Sedatives (barbiturates, antihistamines, tranquilizers)	102
Other medication (quinine, boric acid, camphorated oil, thyroid, Darvon, Exlax, Midol, Numzit, Chlortrimeton)	72
Insecticides	58
Cosmetics	4
Paints	3
Household cleaners, disinfectants, furniture polish,[a] bleaches, etc.	199
Solvents (kerosene, gasoline, paint thinner, turpentine, etc.)	89
Ornamental plants (castor bean, oleanders, Bird of Paradise, etc.	17
Unknown	1

[a] Furniture polish poisoning involved a 16-month-old boy and was fatal.

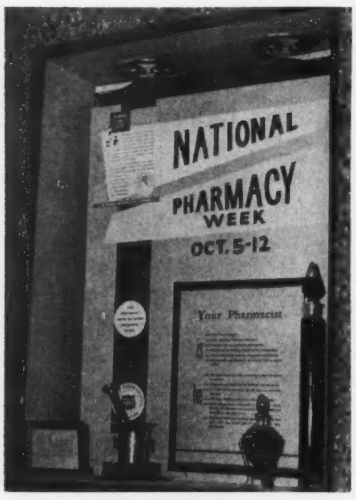
[1] Statistics for State of Arizona, from Poisoning Control Center at University of Arizona College of Pharmacy.

Second Prize in the Retail Competition goes to Stanley Bishop, California Avenue Pharmacy, Palo Alto, Calif.

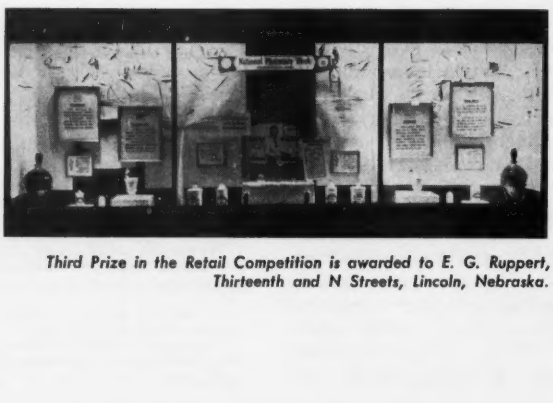
THROUGH RESEARCH AND DEVELOPMENT
From...
A STATIC AND DARK PRACTICE OF YESTERDAY
YOUR PHARMACIST IS THE Keystone OF YOUR COMMUNITY
To...
A DYNAMIC AND MODERN SCIENCE OF TODAY
RED CROSS

Philadelphia College of Pharmacy and Science receives First Prize in the Colleges of Pharmacy Competition.

First Prize in Public Exhibit Competition goes to Louis J. Simon, Phoenix, Ariz.



First Prize in the Retail Competition has been awarded to John Stadnik of Miami Springs, Fla., for a window emphasizing the pharmacist's services to community health.



Third Prize in the Retail Competition is awarded to E. G. Ruppert, Thirteenth and N Streets, Lincoln, Nebraska.

First Prize in Hospitals and Clinics Competition goes to Sister Mary Oswalda, St. Joseph's Children's & Maternity Hospital, Scranton.

The Committee on Public Relations of the APhA has announced the winners in the 1958 National Pharmacy Week Display Contest. The contest is divided into four areas of competition including retail pharmacy, public exhibits, pharmacy colleges, and hospitals and clinics.

In the retail competition, the entries for each state were submitted to the respective state pharmaceutical association committees which had appointed such award committees. The winners of the state contests were then submitted to the national award committee.

Entries for the public exhibit, college, and hospital and clinic competitions were submitted directly to the National Award Committee. All entries in the national contest were judged by a sub-committee of the APhA Committee on Public Relations which included J. Warren Lansdowne, Chairman, George F. Archambault, and John A. Lynch.

The first three prize-winning entries in the retail pharmacy competition will receive cash prizes of $200, $100, and $50 respectively. Each of these winners and the first-prize winners in each of the other three categories of competition will be awarded a suitably inscribed plaque. All other winning entries in the national contest, as well as the winners in each of the state contests, will receive certificates of merit.

It is planned to make the awards in the retail pharmacy competition at conventions of the appropriate state pharmaceutical associations. Other awards will be made at the Convention of the American Pharmaceutical Association to be held in Cincinnati during the week of August 16.

The complete list of winners of the 1958 National Pharmacy Week Display Contest Awards follows:

PRIZE WINNING public relations displays

1958 national pharmacy week window display contest

Retail Competition	*First Place*	John Stadnik, Miami Springs, Florida
	Second Place	Stanley Bishop, California Ave. Pharmacy, 392 California Ave., Palo Alto, California
	Third Place	E. G. Ruppert, 13th and N. Sts., Lincoln, Nebraska
	Fourth Place	Morris L. Cooper, Cooper's Drug Store, 700 West North Ave., Baltimore 17, Maryland
	Fifth Place	Frederick D. Lascoff, J. Leon Lascoff & Son, Inc., Lexington Ave. and 82nd St., New York, N.Y.
	Sixth Place	Charles Schreiber, Tell City, Indiana
Public Exhibit Competition	*First Place*	Louis J. Simon, Simon Drug, Phoenix, Arizona
	Second Place	Society of Mercer County Pharmacists, 49 N. Hermitage Ave., Trenton, N.J.
	Third Place	Phi Delta Chi, 323 11th Ave., S.E., Minneapolis 14, Minnesota
Colleges of Pharmacy Competition	*First Place*	Philadelphia College of Pharmacy and Science, 43rd and Kingsessing, Philadelphia 4, Pa.
	Second Place	New England College of Pharmacy, 70–72 Mt. Vernon St., Boston, Mass.
	Third Place	University of Utah College of Pharmacy, Salt Lake City, Utah
Hospitals and Clinics Competition	*First Place*	Sister Mary Oswalda, St. Joseph's Children's and Maternity Hospital, 2010 Adams Ave., Scranton, Pa.
	Second Place	Louis Jeffrey, Albany Hospital, Albany, N.Y.
	Third Place	S. R. Marincik, California University Medical Center, San Francisco 22, California

STATE WINNERS

Arizona—Louis J. Simon, Simon Drugs, Phoenix
California—Stanley Bishop, California Avenue Pharmacy, 392 California Avenue, Palo Alto
Connecticut—Robert L. Morin, Morin Pharmacy, 56 Main Street, Danielson
District of Columbia—Melvin Pollack, Connecticut Pharmacy, 4455 Connecticut Avenue, N.W., Washington, D.C.
Florida—John Stadnik, Miami Springs
Georgia—W. R. Harbin, Palmer Drug Company, Calhoun
Idaho—Roderick Newland, Orofino
Illinois—Geo. L. Scharringhausen, Jr., Scharringhausen Pharmacy, 110 Main Street, Park Ridge
Indiana—Charles Schreiber, Tell City
Kentucky—William E. Danhauer, Jr., 404 Frederica Street, Owensburg
Maryland—Morris L. Cooper, Cooper's Drug Store, 700 West North Avenue, Baltimore
Michigan—Bert C. Brennan, Princing & Brenann Pharmancy, 3516 State Street, Saginaw
Minnesota—Henry H. Gregg, 4954 France Avenue, South, Minneapolis
Mississippi—H. H. Jones, 816 Second Street, Gulfport
Nebraska—E. G. Ruppert, 13th and N Streets, Lincoln
New York—Frederick D. Lascoff, J. Leon Lascoff & Son, Inc., Lexington Avenue & 82nd Street, New York
Oklahoma—Hobert D. Cox, Jr., Foster Drug Company, Holdenville
Oregon—Wayne Gordon, Capital Drug Company, Salem
Pennsylvania—J. P. Kelly, Kelly's Drug Store, Steelton
South Carolina—Edward P. Walsh, Jr., Horry Drug Company, Inc., Conway
Utah—Wallace G. Kirkman, Jr., Better Service Pharmacy, 432 North Main Street, Logan
Virginia—Roland P. Galley, Galley's Prescription Center, 3801 N. Fairfax Drive, Arlington
Wisconsin—Walter S. Langer, 5201 West North Avenue, Milwaukee

The spoon is one of the first things wanted when we come into the world, and one of the last we part with before we go out. . . . It administers comfort to ladies when they 'lay in,' and without it no baby takes pap, nor boys and girls porridge or soup; the man acquires strength by its aid, and it assists in prolonging the years of the old and infirm. In the hands of physicians, it drives sickness away. (H. O. Westman, "The Spoon," New York, 1844)

Dose: one spoonful

*by George Griffenhagen**

Fig. 1—17th Century Latten Apostle spoon (l), 17th Century pewter spoon, 1799 American tablespoon (r).

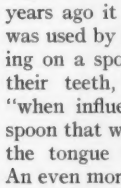
THERE have been many medical uses for the spoon. Over a hundred years ago it was noted that the spoon was used by infants who, by "champering on a spoon" were aided in cutting their teeth, and by physicians who "when influenzas rage . . . ask for a spoon that with it they may press down the tongue to examine the fauces."[1] An even more unusual use of spoon was recorded in the 16th century *Secrets of Alexis* which reported that the spoon was employed to pry open the mouth of the unwilling so that medicine could be administered.

The most common medical use of the spoon, however, was and still is for both measuring and administering drugs. Spoons have been in use as medicine measures for so long, and have become so firmly established in popular practice, that the spoon has become symbolic of liquid medication. Furthermore, a particular spoon has often been set aside in each household to be used exclusively as a medicine spoon, developing certain prized or sacred associations.[2]

While ancient Egyptian spoons are known, there appears to have been little uniformity in their style, shape, or size, and there is no indication in the medical papyri that these spoons were employed for measuring dosages of drugs. On the other hand, ancient Greek and Roman spoons made of bronze and silver began to assume an appearance which we today recognize as a spoon,[3] and recommendations that medicine be taken by spoonful doses were numerous. For example, Pliny the Elder recorded in his *Natural History* (1st century A.D.) that plantain was to be given "to the quantitie of two spoonfuls, and of poppie one spoonfull in foure cyaths of wine" for the removal of "worms breedings . . . in the guts."[4] The Greek word for spoon was *kochliarion* (κοχλιάριον) while the Latin term was *cochlear*, each having been derived from the name of the shellfish *cochlea* (κόχλος). It is well established that the spoon originated from the use of shells by primitive people, but it is not generally known that both the shell and the spoon were used as standard measures by the Greeks and Romans. The spoonful of the Romans was equal to $^1/_{24}$th of a *cyathus* (a small ladle for transferring wine from the mixing bowl to the drinking cup) or 144th of a *hemina*[5] (about 9 fluid ounces). The Greek *cochliarion*, however, was larger than the Roman *cochlear;* ten *cochliaria* equalled a *cyathus* making it equal to a little more than one fluid dram,[6] or nearly the same capacity as the modern teaspoon.

The English word spoon originated from the Anglo-Saxon *spon* meaning chip or splinter of wood, suggesting that the earliest spoons in northern Europe originated from the use of pieces of wood rather than from the use of shells. However *cochlear* was used in its original Latin form in many English documents, and for many centuries the Scots referred to spoons as *cockle-shells*.[7] During the Middle Ages spoons of bone, horn, crystal, wood, and various metals such as pewter, latten, and silver, were in use, and records of the spoon as a measure are numerous. In 1290 it is recorded that "he hadde nought a spooneful ale," while in 1425 was inscribed the direction, "putte herin a sponeful of comon salt."[8] In 1527, the German surgeon Brunschwig recommended a

* Presented before a meeting of the City of Washington Branch, APhA, February 24, 1959.



GEORGE GRIFFENHAGEN, Curator, Division of Medical Sciences, Smithsonian Institution, Washington, D.C., since 1952, received his B.S. degree in Pharmacy (cum laude) (1949) and his M.S. in Pharmaceutical Chemistry as Fellow of the American Foundation for Pharmaceutical Education (1950) at the University of Southern California School of Pharmacy, where he was lecturer in Pharmacy (1950–52). He was Director of Pharmaceutical Research and Assistant General Manager of the Nion Corporation (1950–52) and Secretary General of the 4th Pan American Congress of Pharmacy and Biochemistry (1957). Mr. Griffenhagen is Consulting Curator and Archivist for the APhA.

[1] Westman, H. O., "The Spoon," *Transactions of the Society of Literary & Scientific Chiffonniers*, New York, Nos. 1–4(1844).

[2] Wilbert, M. I., *American Journal of Pharmacy*, **74,** 218(1902).

[3] Stutzenberger, Albert, *The American Story in Spoons*, Louisville, Ky., p. 8(1953).

[4] Pliny's *Natural History* (Holland's translation), London, Book XXVI, Chapter 8(1634).

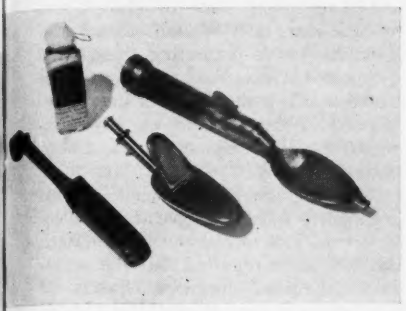
[5] Lewis, C. T., and Sgort, C., *A Latin Dictionary*, Oxford, p. 357(1917); and Liddel, H. G. and Scott, R., *A Greek-English Lexicon*, Oxford, vol. 1, p. 988(1940).

[6] Alexander, J. H., *Universal Dictionary of Weights and Measures*, Baltimore, p. 21 (1850).

[7] Gask, Norman, *Old Silver Spoons of England*, London, p. 36(1936).

[8] Murray, James A. H., *A New English Dictionary on Historical Principles*, Oxford, vol. IX. part 1, p. 661(1919).

Fig. 2—19th Cent. medicine spoons: Taylor, 1852 (l); Gibson, 1828; and Spencer, 1870 (r).



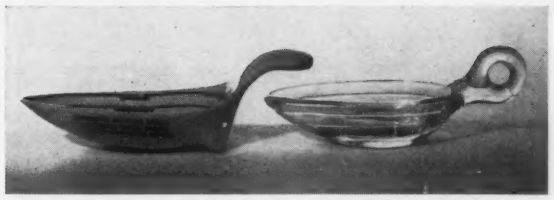


Fig. 4—Graduated medicine spoons: ceramic (l), by Maw, London (1873), glass (r), by Maris, Phila. (1900).

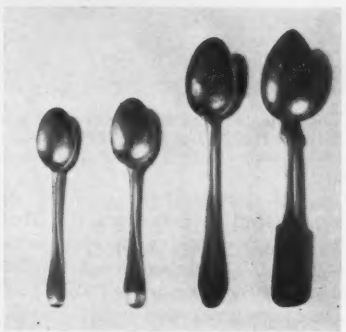


Fig. 5—Teaspoons, showing increase of bowl size (l to r): ca. 1730, 1770, 1800, 1830).

Fig. 3—Early 18th Century silver Nuremberg, Germany, medicine spoon with support of 2 leaf tendrils under handle to keep bowl level (Metropolitan Museum of Art).

certain medicinal water to be "dronke foure spones full at night,"[9] and during the 17th century, English medical practitioners Culpeper and Salmon loaded their translations of the *Pharmacopœia Londinensis* with recommendations for taking "spoonful" doses of many liquid medicines.[10] It was the *Pharmacopœia Londinensis* of the 17th century which provides the earliest medical definition for a spoonful measure. According to the College of Physicians, the spoon or *cochlearum* "in Syrups holds half an ounce, in distilled Waters three drachms." This statement not only emphasizes the fact that the spoons of the period were much larger than the ancient Greco-Roman predecessors, but it anticipates recent studies which conclude that the capacity of a spoon depends upon what is being measured.[11]

Figure 1 shows a typical mid-17th century pewter spoon (in the middle) and an early 17th century latten spoon with an Apostle Knop (on the left). Apostle spoons came into fashion in the 15th century[12] and were prized gifts, often presented at christenings, and handed down from generation to generation. It has been said that Apostle spoons because of their sacred character, often have been employed expressly for the administration of medicine.[13]

If the use of the spoon as a measure for medicines was not thoroughly established by the middle of the 17th century, it certainly soon became the accepted procedure with the introduction and almost immediate acceptance of the popular patent medicines. While the physician could offer substitutes for measuring dosages (such as pills), the promoters of the liquid pre-packaged patent medicines could only suggest that they be measured either by the drop or by the spoonful. In 1673 Daffy's Elixir was sold for administration in doses of three spoonfuls; the Queen's Hungaries Water in the early 18th century was promoted: "Those that are strong may take a whole spoonful at a time; children and weak people a quarter of a spoonfull." Bateman's Pectoral Drops was recommended in doses of "ten drops to a child of a year old, and a large spoonful for a grown person."[14]

[9] Brunschwig, Hieronymus, *The Vertuose Boke of Distyllacyon*, London (1530).

[10] Culpeper, Nicholas, *Pharmacopœia Londinensis*, London (1653); and Salmon, William, *Pharmacopœia Londinensis*, London (1691).

[11] Morrell, C. A. and Ordway, E. M., *Drug Standards*, **22**, 216(1954).

[12] Price, F. G. Hilton, *Old Base Metal Spoons*, London, pp. 32, 38(1908).

[13] Urdang, George and Nitardy, F. W., *The Squibb Ancient Pharmacy*, New York, p. 177 (1940). See also Rupert, C. G., *Apostle Spoons, their Evolution*, London (1929); Ferris, M. P., "A Chapter on Some Old Spoons," *Harper's Bazaar*, **23**, 755(1890); and Wimsatt, Genevieve B., "Apostle Spoons in America," *American Home*, **35**, 50 (March, 1946). Only Urdang however speculates on the exclusive use of the Apostle Spoon for Medicine.

[14] *Elixir Salutis: the Choice Drink of Health*, London (1673), preserved at the British Museum; and broadsides preserved at the Wellcome Medical Historical Library, London.

[15] Murray, *op. cit.* The earliest reference to the teaspoon was 1686.

[16] Pemberton, H., *The Dispensatory of the Royal College of Physicians*, London, p. 128 (1760).

[17] Duncan, Andrew, *The Edinburgh New Dispensatory*, Philadelphia (1791); and *Pharmacopœia Collegii Regii Edinburghensis*, Edinburgh (1783).

The designation "large spoonful" by the Bateman promoters may be one of the earliest references to the problem which was developing in the 18th century insofar as using the spoon as a medicine measure is concerned. With the introduction of tea as a beverage, the "tea-spoon" was introduced late in the 17th century. By the middle of the 18th century, the teaspoon was a common household implement and in the 1760's, the larger spoon was reidentified as the "Table Spoon".[15] The silver tablespoon in Fig. 1 (on the right) dated 1799, has nearly the identical bowl capacity of the 17th century spoon, i.e., one-half fluid ounce.

Many of the patent medicine broadsides ignored the transition by continuing to recommend only "spoonful" doses, and as late a 1760 the *London Dispensatory*[16] still listed a "spoonfull" at one half ounce. A broadside for Dalby's carminative (*circa* 1785), however, specifically recommended "to a child from one to Two years old, give a large Tea-spoonful; To a Child of seven years old, two Tea-spoonfuls or more." In contrast, the Edinburgh College of Physicians in 1783 "sensible of the many errors from the promiscuous use of measures, and of different kinds of these" (without specifically mentioning the spoon) entirely rejected listing measures in the *Edinburgh Pharmacopœia*.[17]

Thacher's *American New Dispensatory* of 1813 explained that the Edinburgh College had rejected measures because failure to allow for variations in the specific gravity of liquids was a com-

Fig. 6—Three original U.S. Patent Office models of medicine spoons invented (left to right) by Colby and Thompson (1873), J. U. Force (1879), and D. J. Pearson (1865).

mon source of error. However the London College sanctioned the use of measures, realizing that they "will probably always be retained." Thacher noted that "the measure of a table- and of a tea-spoonful are sometimes used in extemporaneous prescriptions and though not very accurate, may be admitted where a small difference in the dose is not important. The one is understood to be equal to half an ounce by measure, the other to about one drachm."[18]

In 1826, Benjamin Ellis gave the same equivalent, observing that "these measures are sufficiently accurate where no greater precision is requisite,"[19] while Wood and Bache's *United States Dispensatory* of 1834 noted that "for the sake of convenience, and in the absence of proper instruments, we often make use of means of measurement which, though not precise nor uniform, afford results sufficiently accurate for ordinary purposes." Wood and Bache also set the teaspoon (*cochlear parvum*) at "one fluidrachm" and the tablespoon (*cochlear magnum*) at "half a fluid ounce."[20]

These equivalents soon came under attack. Griffith's *Universal Formulary* for 1850 protested that the capacity of the teaspoon "is rated too low; they apply very well to the teaspoonful formerly used but not to the much larger kind now in general use."[21] Fig. 2 clearly shows how the teaspoon increased in bowl size from 1730 to 1830.

Simultaneously with the evolution of the capacity-of-the-spoon problem, medicine spoons designed expressly for facilitating administration of liquid pharmaceuticals were also being developed. There is an elaborately decorated 18th century German medicine spoon preserved in the Metropolitan Museum of Art in New York (Fig. 3) which was provided with a support on the back of the handle so that the bowl could be kept level while the medication was being poured into the bowl.[22]

In England, G. Gibson introduced to the Royal Society of Arts in 1828 his invention for a medicine spoon of a unique character.[23] One of these pewter spoons made by surgical instrument maker George Maw of Aldersgate Street, London, is illustrated in the center of Fig. 4. It consists of a covered bowl with a hinged lid and a small opening at the tip. The handle is hollow for admission of air to facilitate delivery of the medicine. These spoons were popular for administering castor oil.

The rush to the U.S. Patent Office with inventions for medicine spoons started as early as 1852 when Dr. I. C. Taylor obtained a patent for the spoon shown on the left in Fig. 4. Other original patent office models of medicine spoons (all now preserved at the Smithsonian Institution) are shown in Figures 4 and 5.[24] The claim of inventing the supports under the spoon "to keep the bowl on a perfect level" were anticipated by the 18th century Germans, and the covered bowls and hinged lids were only modifications of the 1828 Gibson medicine spoon.

In an attempt to correct the problem of variations in spoons as a measure, S. Maw, Son and Thompson (successors to Maw of Aldersgate) introduced and registered in England on March 22, 1873 a porcelain graduated medicine spoon (shown in Fig. 6) which was inscribed with lines on the interior of the bowl to designate teaspoon, dessertspoon, and tablespoon measures.[25] In 1879, Hagerty Brothers of New York City offered for sale a similar graduated medicine spoon made of glass,[26] and twenty years later Whitall, Tatum and Company were promoting these glass graduated spoons "in lots of two gross and upwards with customers' name, etc. pressed in the glass as an advertisement."[27] Figure 6 shows a glass graduated spoon made by John M. Maris.

These graduated medicine spoons completely failed to solve the problem of accuracy of measurement. In 1902, M. I. Wilbert reported that the porcelain graduated medicine spoons of English manufacture and the pressed glass graduated spoons introduced in America were even less reliable as medicine measures than the teaspoon itself;[28] and the use of the household teaspoon as a measure of potent medicines was deplored.[29] Following these reports, and with the legal acceptance of the metric system, the AMERICAN PHARMACEUTICAL ASSOCIATION in 1902 adopted a resolution defining that "a spoon is full when the liquid it contains comes up to but does not curve above the upper edge or rim of the bowl," and calling for the establishment of the teaspoon capacity at 5 cc., the dessertspoon at 10 cc. and the tablespoon at 15 cc.[30] Fifteen years later, Arny[31] in a paper entitled "The Tyranny of the Teaspoon" complained that despite this resolution, which was also adopted by the Section on Pharmacy of the American Medical Association in 1903, the official compendium continued to carry the equivalent of the teaspoon at 4 cc. Again in 1934, Nitardy[32] as well as editorials in the journals of the APhA[33] and the AMA[34] renewed efforts "to induce the USP to recognize 5 cc. as the most nearly correct metric equivalent for an average teaspoonful" to conform to the figure recognized in the French, German, Danish, and Swiss pharmacopœias.

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[18] Thacher, James, *The American New Dispensatory*, Boston, p. 91 (1813).

[19] Ellis, Benjamin, *The Medical Formulary*, Philadelphia, p. xv. (1826).

[20] Wood and Bache, *United States Dispensatory*, 2nd Ed., p. 1123 (1834).

[21] Griffith, R. E., *A Universal Formulary*, Philadelphia, p. 17 (1850).

[22] Metropolitan Museum of Art, *The Collection of Spoons made By Mrs. S. P. Avery, 1867–1890*, New York, (1899) pp. 6, 17, and Plate 5, Nos. 127 and 128.

[23] Mrs. Agnes Lothian Short, to whom this author is indebted for this data, reports that she is writing an article for publication on the history of this unique medicine spoon.

[24] U.S. Patents: No. 8, 749; 51,748; 75,139; 92,278; 107,419; 139,944; and 212,677.

[25] *Pharmaceutical Journal*, advertisements, (Sept. 27 and Dec. 20, 1873).

[26] Hagerty Bros. & Co., *Catalogue*, New York, p. 62, (1879).

[27] Whitall, Tatum & Co., *Price List*, New York p. 24, (1898).

[28] Wilbert, *op. cit.*

[29] Wilbert, I. M., *American Journal of Pharmacy*, **74**, 218, (1902); Lowe, C. B., *American Journal of Pharmacy*, **73**, 593, 1901; White, W. H., and Wilcox, R. W., *Materia Medica, Pharmacy, Pharmacology and Therapeutics*, Philadelphia, p. 18, (1898); and Proctor, B. S., *Pharmaceutical Journal* 3rd ser., **8**, 809, 820 (1877).

[30] *Proceedings of the American Pharmaceutical Association*, **50**, 212, (1902). The dessertspoon was a 19th century development.

[31] Arny, H. V., *Journal of the American Pharmaceutical Association*, **6**, 1056, (1917). *USP VIII* had established the equivalents at 4, 8, and 16 cc., while *USP IX* only substituted the "mil" for cc. *USP X* set the equivalents at 4, 8, and 15 cc. and *USP XI* dropped the equivalents altogether.

[32] Nitardy, F. W., *ibid.*, **23**, 813 (1934).

[33] *Ibid.*, **23**, 1070 (1934).

[34] *Journal of the American Medical Association*, **103**, 1457(1934).

In 1956, the National Bureau of Standards defined three teaspoons as equal to one tablespoon or 4 fluid drams for household purposes, thereby making the teaspoon equal to $1\frac{1}{3}$ fluid drams.[35] Using the National Bureau of Standard Conversion of 3.697 ml. for one fluid dram,[36] the teaspoon capacity was set at 4.93 ml. In 1949, for household purposes, the American Standards Association adopted tolerances for the teaspoon of 4.93 cc. ± 5% when leveled with a straight edge of a knife or a spatula.[37]

The Canadian Government Specifications Board in 1954 defined a teaspoon as containing 4.74 ml., but the Canadian Food and Drug Division amended their regulations to recognize 5 cc. as the volume of a teaspoon for calculating medicinal dosage.[38] The 15th Revision of the *United States Pharmacopœia*, which became official in 1955, reported that "agreement has not been reached with respect to a standard pharmacopeial teaspoon in spite of the need for such a standard measure in connection with compounding and labeling liquid medicines." The USP, however, added that "in view of the almost universal practice of employing teaspoons ordinarily available in the household for the administration of medicine, the teaspoon may be regarded as representing 5 ml."[39]

Despite the USP recommendations, or perhaps because of the absence of an official standard set by the USP, some commonly used texts continue to give the teaspoon equivalent as 4 cc.,[40] which in turn has been reported to cause varying degrees of confusion and concern.[41] Thus this matter which came under discussion and controversy nearly 300 years ago still remains unresolved, even though many of the recent findings, such as variation of capacity depending upon the liquid measured, were anticipated centuries ago. The most ironical of all is that the ancient Greek *cochliarion* was the equivalent of 4.5 cc.,[42] exactly halfway between the controversial 4 and 5 cc. measure. ■

[35] National Bureau of Standards, Publication No. 39, *Household Weights and Measures*, 1st Ed., n.d. (ca. 1919); 2nd Ed., April 1, 1920; 3rd. Ed., June 1, 1926. The tablespoon was also given as 15 cc.

[36] Judson, L. V., *Units and Systems of Weights and Measures, Their Origin, Development and Present Status*, National Bureau of Standards Circular 570, Washington, D.C., (May 21, 1956).

[37] American Standards Association, *American Standard Dimensions, Tolerances, and Terminology for Home, Cooking and Baking Utensils*, New York, (1949). The tablespoon was defined as measuring 14.74 cc.

[38] Morrell and Ordway, *op. cit.*

[39] *The Pharmacopœia of the United States of America*, 15th Revision, Easton, Pa., p. 832 (1955).

[40] *The Merck Manual*, 9th Ed., Rahway, N.J., p. 1830, (1956), gives the equivalent of teaspoon as 4 cc. *Blakiston's New Gould Medical Dictionary*, New York, p. 1205 (1956), defines teaspoon as "a spoon commonly assumed to hold about 4 cc. but usually holding 5 cc."

[41] THIS JOURNAL, **18,** 143(1957); Nevis Cook (FDA) Address before District 7, NABP—AACP, Savannah, Ga.; August 26, 1957.

[42] One *cochliarion* is equivalent to 0.00119 gallons (U.S.) or 4.504 cc.

4-Fold Increase in Ethical Drug Sales by 1975

Industry sales of prescription drugs will quadruple by 1975, reflecting "boundless medical advances in an era of unprecedented health," George B. Stone, manager of the J. B. Roerig Division of Chas. Pfizer & Co., Inc., told the central region meeting of the Pharmaceutical Manufacturers' Association on Feb. 11. He said that ethical drug sales will pass the $2,000,000,000 mark in 1960.

His predictions, based on a study he conducted at the Massachusetts Institute of Technology, assumed the following timetable of major medical breakthroughs:

1. A cancer cure by 1965.
2. A heart disease drug or series of drugs by 1962.
3. Major new drugs for treating mental disease by 1962.
4. An effective vaccine for the common cold by 1962.
5. An important breakthrough in rheumatism and arthritis diseases by about 1962.

These advances, coupled with population growth and increasing life expectancy, he said, should bring ethical drug sales by 1965 to $2,800,000,000. In 1970 they would hit $3,800,000,000. Then, with anticipated medical breakthroughs in cancer, heart, rheumatic, virus, and mental diseases, the $5,200,000,000 mark might well be reached by 1975. See the graph.

"Undue government regulations and actions in the future would undoubtedly affect research expenditures," he declared. He added: "Such an undesirable turn of events would in turn appreciably slow down the growth of the industry and the pace of drug discovery."

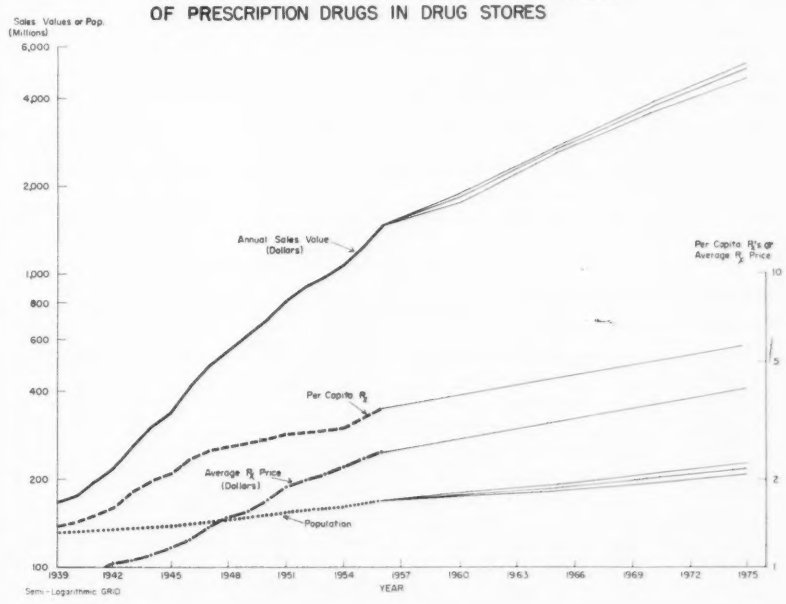
He pointed out that the drug industry expects to invest more than $190,000,000 in research this year. He said the chance of success in pharmaceutical research is small compared to the amount of money and effort invested.

"While millions of dollars have gone into the search for antibiotics and while many hundreds were discovered and isolated," Mr. Stone said, "only slightly more than 100 have reached commerical development, of which only 6 can be said to have real market value."

Ethical or prescription drugs now outsell over-the-counter proprietary products, he said. The prescription drug market expanded 15-fold in the last 20 years. It is growing much faster than the proprietary market, and may well account for more than 90% of total drug sales by 1975, he asserted.

"The continued development of new and life-saving drugs has acted as a giant brake on the mortality rate," the Pfizer manager told the pharmaceutical manufacturers meeting. Drugs will continue to reduce the Nation's mortality rate and add "useful and productive years to our lives."

GROWTH AND PROJECTION OF ANNUAL SALES VALUE OF PRESCRIPTION DRUGS IN DRUG STORES



Federal and State Actions

FDA Actions

Illegal Over-the-Counter Sales for the Month of February

Florida—Hubert L. Danese, t/a Danese Pharmacy, Jacksonville—Selling barbiturates and amphetamine without physicians' prescriptions. Sentenced to 2 years in prison and placed on probation for 3 years to commence at end of prison sentence.

Massachusetts—Olga G. Kirsch, t/a Harold Pharmacy, Beachmont (Revere)—Refilling prescriptions for barbiturates and amphetamine without physicians' authorizations. Fined $750; 6 months' jail sentence suspended and placed on probation for 1 year.

New Jersey—Sol Wolfson, t/a Northfield Pharmacy, Don Rubin, pharm., Livingston—Refilling prescriptions for amphetamine and barbiturates without physicians' authorizations. Wolfson fined $3,000; Rubin fined $300.

New York—Leon Lerea, pharm. (Stratton Pharmacy), Scarsdale—Selling and refilling prescriptions for barbiturates, amphetamine, and sulfonamides without physicians' authorizations. Fined $250.

Texas—Earsel H. Becton, t/a Burbank Pharmacy, Houston—Selling hormones, prednisone, sulfonamides, and antibiotics without physicians' prescriptions. Fined $200; 6 months' prison sentence suspended and placed on probation for 3 years.

Misbranded Drugs and Device

Minnesota—William R. Hall, spieler, Minneapolis—A rubbing compound and an inhaler and the oil to be used with the inhaler were misbranded with false and misleading claims that they were useful for preventing and treating various serious and chronic diseases. Fined $500 and sentenced to 4 months in prison. (Terminated in January but not previously reported by the FDA).

N-Acetyl-p-Aminophenol Preparations Exempted

N-Acetyl-*p*-Aminophenol preparations will be exempted from the prescription dispensing requirements of the Federal Food, Drug, and Cosmetic Act. Each dosage unit must containt not more than 5 grains of the drug or if a liquid not more than 100 mg. per ml. Recommended dosages must not exceed 10 grains per dose or 40 grains per 24 hours for adults; one-half the maximum adult dose for children 6–12; and one-fifth of the maximum adult dose for children 3–6.

The labeling must bear a warning statement against administration of the drug to children under 3 years of age and against use of the drug for more than 10 days unless such uses are directed by a physician.

Evidence now available, according to the FDA, shows that the drug can be safely used by the laity in self-medication if it is used in accordance with the proposed labeling and that restriction to prescription sale is no longer necessary for the protection of the public health. [*Fed. Reg. 40*, 1475 (Feb. 27, 1959)].

FTC Actions

Carey Surgical Appliance Co.—R. C. Myrick, who trades as Carey Surgical Appliance Co., 54 West Randolph St., Chicago Ill., was charged by by Federal Trade Commission with misrepresenting the effectiveness of his truss, designated as "Hernia Guard," "Vacumatic Hernia Guard," and "Vacuum Pad." Mr. Myrick also has an office at 921 Canal St., New Orleans, La. Also cited in the Commission's complaint is the manager of his Chicago office, Dorothy M. Myrick.

Hicks Pharmacal Co.—The Federal Trade Commission today charged the maker of Arthrycin and the company's advertising agent with misrepresenting the preparation's effectiveness in permanently relieving the severe pains of arthritis and rheumatism. Named in the Commission complaint are the maker, Hicks Pharmacal Co., 136 Tichenor St., Newark, N.J., and the advertising agent, Kenneth Rader Co., Inc., 18 West 56th St., New York City. Carl H. White, Jr., John Garvey, and Henry K. Berman are cited as officers of Hicks.

Mytinger & Casselberry, Inc., of Long Beach, Calif. Argument on respondents' motion to dismiss set for Friday, Jan. 16, at 2 P.M., in Room 532, Federal Trade Commission Building, Washington, D.C., Alleged exclusive dealing, restraint of trade, and misrepresentation in the sale of Nutrilite Food Supplement. (Hearing Examiner, Abner E. Lipscomb; Atty., Fredric T. Suss)

Communicable Diseases Summary

The number of cases of the communicable diseases shown in the table below are based on reports by Health Officers of each State and of Hawaii *and* Puerto Rico to the National Office of Vital Statistics of the Department of Health, Education, and Welfare, Washington, D.C. The number of cases of each disease occurring during each of the last 5 weeks is reported and also cumulative totals to date for 1959 and for the corresponding period of 1957–1958. The approximate seasonal low point for each of the diseases is shown in the last column. The 1954–1958 medians will appear next month.

Communicable Diseases *Selected Notifiable Disease*	Cases Reported for Week Ending *Feb. 14, 1959*	*Feb. 21, 1959*[b]	*Feb. 28, 1959*[d]	*Mar. 7, 1959*	*Mar. 14, 1959*[h]	Cumulative Number *First 10 weeks 1959*[h]	*First 10 weeks 1958*	*Median 1954–58*	Low Point (*Approximate Seasonal*)
Anthrax	–	–	–	–	–	–	–	4	*i*
Botulism	–	–	1[e]	–	1[j]	2	–	–	*i*
Brucellosis	11	8	5	12	26	123	133	159	*i*
Diphtheria	18	22	23	22	19	231	165	383	July 1
Encephalitis, infectious	23	23	23	28	24	251	209	202	June 1
Hepatitis, infectious and serum	593	587	615	584	543	5,574	3,197	5,100	Sept. 1
Malaria	–	–	–	1	2	13	7	28	*i*
Measles	11,482	13,286	15,606	16,761	17,983	122,934	156,224	141,285	Sept. 1
Meningococcal infections	54	53	45	59	61	528	666	727	Sept. 1
Meningitis, other	58[a]	50[c]	61[f]	58[g]	62[k]	622	544	– – –	– – –
Poliomyelitis	17	13	25	19	21	214	158	832	Apr. 1
Paralytic	11	8	16	16	14	150	90	377	Apr. 1
Nonparalytic	4	2	5	1	3	32	49	213	Apr. 1
Unspecified	2	3	4	2	4	32	19	158	Apr. 1
Psittacosis	1	–	5	1	2	17	27	49	*i*
Rabies in man	–	–	–	–	–	–	1	1	*i*
Typhoid fever	7	13	8	10	6	107	145	237	Apr. 1
Typhus fever, endemic	2	1	1	1	–	6	9	13	Apr. 1

[a] Includes 10 cases of aseptic meningitis. [b] Data excludes reports from Mont. and Wisc. for the current week. [c] Includes 6 cases of aseptic meningitis. [d] Data exclude reports from Miss. and Neb. for the current week. [e] Reported in Calif. [f] Includes 13 cases of aseptic meningitis. [g] Includes 6 cases of aseptic meningitis. [h] Data exclude reports from Fla. and Idaho for the current week. [i] Data show no pronounced seasonal change in incidence. [j] Reported in Calif. [k] Includes 13 cases of aseptic meningitis. Symbols: 1 dash (–): no cases reported; 3 dashes (– – –): data not available.

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Legislation

Health for Peace[1]

THE MOST IMPORTANT piece of health legislation to come before the U.S. Congress for a long time is Senate Joint Resolution 41, known as the "Health for Peace Act." The Honorable Lister Hill, Senator from Alabama, introduced S. J. Res. 41 on February 2, 1959, and hearings were held during February and March, with many prominent persons testifying on behalf of the proposed program of international cooperation in medical research.

Specifically, the bill would authorize creation of a program to bring about:

1. A freer flow of knowledge and information among the scientists and research workers of all nations.
2. A coordination of research to avoid, to the maximum possible extent, duplication of research efforts here and abroad.
3. A vastly expanded program of exchange of doctors, scientists, research workers, and technicians between this country and abroad by means of travel, study, and conferences.
4. A vastly expanded program of training of additional research scientists and technicians.

S. J. Res. 41 implements the 1958 amendment to the Mutual Security Act, in which Congress declared it is the policy of the United States to continue and to strengthen mutual efforts among the nations for research against diseases such as heart disease and cancer. In furtherance of this policy, the Congress invites the World Health Organization to initiate studies looking toward the strengthening of research and related programs against those and other diseases common to mankind or unique to individual regions of the globe.

Powerful bipartisan support for the "Health for Peace Act," with 47 Democrats and 11 Republicans sponsoring it, indicates that the need for cross fertilization of work in the health field both nationally and internationally is clearly recognized. Every nation in the world would benefit from such a program.

A Critical Need

Senator Hill in his speech to the Senate, of February 2, said:

We seek from this program no benefits for ourselves except those which can be shared most broadly with every nation and every people—the benefit of knowledge of the nature of diseases and disabilities which still afflict mankind, and the techniques and facilities which are necessary to combat and overcome them.

. . . .the programs proposed in this joint resolution do not replace or affect any of the programs of cooperation with other countries in health matters now under way. . . . . This resolution deals only with encouragement of medical research on an international level. . . . . The enactment of this legislation is essential to permit the United States to take the lead and to do its part in this vital work. . . . .in the field of disease and disability we—both here in America and throughout the world—face problems of increasing gravity. . . . . New diseases and new varieties of diseases are appearing. Old immunities are disappearing. . . . .air travel has brought old diseases to new places. . . . . A number of new and baffling viruses seem to be appearing in epidemic form. . . . .

In 1957, cancer killed one American every 2 minutes. And of those who died of cancer, 75,000 men and women were in their thirties, forties, and fifties—in the prime of productive life. Unless we find the answer to this dread disease in its many forms, two-thirds of all American families will be touched by cancer, and 40,000,000 persons now alive in the United States will be disabled by cancer.

Around the earth, the incidence of cancer is on the increase in 33 countries. . . . .diseases of the heart and circulatory system were responsible for more than 50%—some 800,000—of the total deaths in the United States. . . . . 158,000 had not reached the age of retirement.

Today there are between 9 and 10 million people in the United States who suffer from a mental defect of sufficient seriousness to require hospitalization. . . . . This is 1 out of every 20 men and women and children in America. . . . . The number of people who are being permanently crippled and disabled by disease and accident each year in the United States and in the world is much greater than the number who are being rehabilitated and restored to active life each year. . . . .

Half the people of the world are suffering from malnutrition. Some scientists believe that the discontent, unrest and threat of war which brood over the world may be traceable in part to malnutrition. . . . .

Another subject is the matter of congenital defects in children. A quarter of a million infants with significant congenital defects are born every year. We know very little about the predisposing causes of such defects. . . . . Likewise, in regard to cerebral hemmorhage and other diseases and accidents of the brain, we stand only at the threshold of clear scientific understanding. . . . .

. . . .There is a critical need for concerted international planning, programing, and prosecution of research. . . . .

The kernel of a great medical discovery may be unwittingly brought to light in an obscure laboratory in Poland, or Thailand, or Ecuador. . . . . But all too frequently, the obscure finding does not come to light for years. Progress is impeded. . . . .

Let me now summarize, as briefly as I can, the means, methods, and particular purposes set forth in this joint resolution:

First. It would establish a National Institute for International Medical Research as part of the National Institutes of Health.

Second. It would establish a National Advisory Council for International Medical Research. . . . .

Third. It would authorize the appropriation of $50,000,000[2] annually to be expended under the supervision of the Secretary of Health, Education, and Welfare. . . .

Favorable Testimony

The Senate Committee on Labor and Public Welfare held hearings on S. J. Res. 41 beginning the last week in February. All of the many prominent persons who testified were wholeheartedly in favor of the bill. For example, General of the Army Omar N. Bradley, testifying before the Committee, said:

While the dangers of armed conflict between nations are due primarily to conflicts of interests or differences in ideology, I believe that any field of common interest, or common effort or exchange of ideas, tends to a better understanding of each other's views and contributes to an eventual lessening of tensions.

We spend large sums to help the peoples of countries that have less of the material things than ourselves. Probably one of the greatest contributions we could make would be assistance in solving the health and rehabilitation problems of our neighbors—and today with the progress in means of travel, every nation in the world is our neighbor. Some peoples have been unable to avail themselves of cures or preventive means already developed.

Dr. Paul Dudley White, speaking in support of the bill before the same Senate Committee, said:

Whatever helps physical health is likely to improve the mental capacity, morale, and happiness of people everywhere. Of course the spiritual health of individuals and whole communities is of greater importance even than the physical health but one of the most challenging and pleasant duties of the true physician is to deal with the whole man—body, mind, and soul. Therefore, we may hope that benefit will come to all these human needs through better international understanding and cooperation in the field of medicine.

E. B. Whitten, Executive Director, National Rehabilitation Association, said before the same Committee:

As important as is its potential contribution to the improvement of health of the world, the potential of this legislation for improving relationships among people of various nations is even more significant. . . . .

Results of such programs spread like waves on a lake. In Mexico City, I saw

[1] See "Health for Peace" by Howard A. Rusk, M.D., THIS JOURNAL, 18, 616(1957).

[2] This specified amount will be deleted from the final bill because at the present time $80,000,000 is already being spent in this field by HEW.

a small but very efficiently operated facility for teaching deaf children, the first to be established in that great country. Two young women trained in this country were the chief instructors and, significantly, students from seven other Latin-American countries were studying under them expecting to go back to their own countries to develop rehabilitation programs for the deaf.

A Note of Warning

President John T. Connor of Merck & Co., Inc., stated that he was wholeheartedly in support of the aims and purposes of this bill. He said:

> The International Medical Research Act stirs the imagination with its opportunities for a new breakthrough in international relations as well as in medical research. It can give a new dimension to foreign affairs and a new versatility to United States foreign policy. . . . .

Mr. Connor pointed out that the principal areas in which the program established by this bill would operate are the free world nations of Western Europe and Japan, the Soviet Union, and the underdeveloped countries. Each presents a different potential, and each calls for a different approach. Speaking of Russia, he sounded a note of caution:

> Any such cooperation with the Russians in this medical research field should, in my opinion, be initiated on a small scale. It should be developed gradually, step by step. We should have safeguards that the plan is in fact reciprocal.
>
> Certainly we should not lightly trade away the important technical resources of our pharmaceutical and chemical industries, which constitute an invaluable national asset which can be used to good advantage. I want to emphasize that our pharmaceutical and chemical developments are way ahead of the Russians. Although Russia undoubtedly has the technical skill and resources to catch us, in time, I'd make them take that time and expend their own effort for this purpose. If we do so, they'll have less time for their missile developments. . . . .
>
> The newly developing countries know that the essential foundation for the advancement of any nation, even before education and vocational training, is the health of its people. And we can expect that a vital phase of the competition with Russia in the under-developed areas will be in the field of medicine and medical research. It may well be the deciding factor in building friendships among the uncommitted nations. . . . .
>
> The rising expectations of the people of the uncommitted countries for a better life is the most powerful political force in the world today. The Soviet Union understands this. . . . .
>
> But under our free system, we do have in America resources we can draw upon in this competition against disease. We have resources of the heart and the spirit, resources drawn from our national tradition of generosity and humanitarianism, from our heritage of Christian ideals. To those spiritual resources, we are able to join the excellent material resources of Twentieth Century medicine—in people with medical skills and techniques, in medical facilities and equipment, and in effective drugs. . . . .
>
> The pharmaceutical and medicinal chemical industry constitutes one of our strongest national resources. Through its research, the industry has accumulated a valuable store of knowledge and know-how. We are far ahead of Russia. I have searched diligently and I have yet to unearth a single important development by Russia in pharmaceuticals. All the new discoveries and developments in modern drugs—anti-diabetics, vitamins, sulfa drugs, antibiotics, hormones, mental health drugs—were developed among the nations of the West. Recently my own company was able to forestall a major move in the Russian health offensive in India by helping the Indian government build a modern streptomycin plant.

Mr. Connor concluded by hoping that special attention be given to research, research training, and fellowships in the underdeveloped areas of the world. He urged that the Committee make provision in the legislation for the following functions and activities:

> 1. Research teams to survey the health problems of the newly developing areas, country by country, and establish priorities for the medical research and assistance that can be most fruitful in each country. . . . .
> 2. Research in the science of public health, as provided in the legislation, of such scope and nature as to give added emphasis to the importance of public health and elevate it to equal partnership with the curing of disease. . . . .
> 3. Expanding training of nurses, hospital and clinical technicians, and other members of an effective health team. . . . .

Administration's View

On March 10 the Honorable Arthur S. Flemming, Secretary, Department of Health, Education, and Welfare, and his associates, Surgeon General Leroy E. Burney, U.S. Public Health Service; Miss Mary Switzer, Director, Office of Vocational Rehabilitation; and Mrs. Katherine B. Oettinger, Chief, Children's Bureau, testified on S. J. Res. 41.

These spokesmen emphasized the humanitarian aspects of the bill and the need for creating productive people in a time of explosive population growth. Dr. Flemming said:

> I was delighted to discover that in the fiscal year 1959 our nation will spend approximately $80,000,000 in the international health field. I am even more delighted to note that the budget for 1960 submitted by the President contemplates increases in expenditures in this area that could lead to total expenditures of approximately $100 million. . .
>
> Although most of the activities which S. J. Res. 41 would authorize are now authorized under existing laws, it is clear that it would be advantageous, as this resolution does, to bring these authorizations together into one law. . .
>
> A large percentage of the citizens of our nation recognize the existence of spiritual laws. They recognize that one of these laws places upon us an obligation to help other peoples realize their highest possibilities. They are willing to apply this law to the life of our day.

There was general agreement that the proper agency to administer the program is the Department of Health, Education, and Welfare.

Fishing Expeditions

A disturbing legal precedent was established in New York State recently when a lawyer obtained a Supreme Court order to examine hospital records without even filing a suit before hand.

An infant sustained burns on the buttocks when it was placed on a water mattress after an operation for a serious hernia soon after birth at the Arnot-Ogden Memorial Hospital in Elmira, N.Y.

Although the burn on the buttock was only about the size of a dime, the father's lawyer decided that the family might have a case against someone. He was not quite certain how to write his complaint. He was not certain whether to hold the operating surgeon, his assistant, the anesthesiologist, or the nurses and consequently the hospital responsible. He, therefore, obtained the court order in spite of the fact that the physician's lawyer wanted to arrange a conference and give the plaintiff's attorney all the factual information he needed to draw up his complaint.

The hospital's lawyer stated that the plaintiff's attorney should not have seen the hospital's records unless they filed a real law suit or unless there was a claim that the facts were being withheld. He felt that the judge ruled incorrectly by ruling in favor of "fishing expeditions" in hospital records.

Somewhat analogous situations could occur if some of the bills recently introduced in the Congress of the United States were enacted; for example, the bill by Senator Kefauver which would throw open corporation records to investigators of the Federal Trade Commission while cases are being prepared. There is widespread agreement with the editorial in the *Wall Street Journal* for March 6 which says:

> . . . . we can recall some words in the Constitution that protect the public from unreasonable search and seizure of their "persons, houses, papers, and effects" without first obtaining warrants issued upon probable cause and supported by oath or affirmation. It seems to us that these proposals of Mr. Hansen and Senator Kefauver, legal or not, do violence to that concept of individual freedom spelled out in Article IV of the Bill of Rights. So we hope Congress will go slow about this sort of net spreading. . . . We think the Senator was as close to right as he'll ever be when he suggested that opponents of this needless demand for increased policy power might think of it as just a tool for Federal "fishing expeditions."

Also along the same line are the bills introduced into Congress and elsewhere which would permit investigators to search prescription files without need for a warrant.

At the rate we are going, it will not be long before Big Brother will be watching us at every turn.

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you can dispense POLARAMINE

...the **newest** antihistamine

in a tasty **syrup**

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New, delicious-flavored POLARAMINE Syrup assures greater acceptance of medication by children and those preferring a liquid dosage form. It is compatible with many frequently prescribed medications.

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Schering

Economics

by Richard R. Dier

Increased Competition Faces Producers

Antibiotic producers face more than possible competition from new entries, Mr. McKeen explained. They have developed strong competition with each other.

Last year, the U.S. Federal Trade Commission reported that "the manufacture of antibiotics, like the manufacture of all drugs and medicine, is subject to certain inherent risks. One is the risk of obsolescence of any or all of its products if they lose their potency due to the development of resistance or if still more effective remedies, or equally effective but cheaper remedies, are discovered. If a manufacturer is to keep up with the progress of the industry, he must develop new products as well as new uses for old products."

Antibiotics Production

The dynamic rise in production and sales of antibiotics since 1945 is noted by the U.S. Tariff Commission which points out that pharmaceutical manufacturers produced about 12,000 pounds of antibiotics that year. By 1956, the figure had soared to 3,200,000 pounds, an increase of more than 250 times (see Chart I).

In a recent speech in Chicago at the Mid-West Forum of the Investment Analysts Society of Chicago, John E. McKeen, President of the Pfizer Company, said that the government study of the antibiotics industry shows that total dollar sales of antibiotics rose only two-fold from 1948–1956 while total production increased 16 times. This was due in part to numerous price reductions.

In 1958, approximately $450,000,000 worth of antibiotics were sold by manufacturers. Human medicine accounted for about 85% of total sales.

Antibiotics Reduce Medical Care Costs.

Many infections formerly requiring weeks of hospitalization are now treated right at home with antibiotics costing less than a single day of hospital care.

Prior to the advent of antibiotics and sulfa drugs, a pneumonia patient would spend about 5 weeks or more in the hospital and several more weeks of convalescence before going back to work. The cost of the illness would run over $400, aside from lost wages. Besides, 1 out of every 4 pneumonia victims died.

Today, most cases are treated right at home and recover within 2 weeks. The cost is rarely more than $25 in drugs and perhaps $35 in doctor bills. Further, chances of recovery from pneumonia are almost 20 to 1.

Drug Industry Growth Pattern

In 1958, the ethical pharmaceutical industry achieved increased sales ranging from 5% to 6% over 1957.

Increases in sales and earnings during 1958 were established despite weakening in prices among certain product groups, according to *Science and Securities*, published by the Research Department of Harris, Upham & Co., New York City. These groups include bulk vitamins, penicillin and streptomycin, polio and Asian influenza vaccines, narrow spectrum antibiotics, and, to a slight extent, broad spectrum antibiotics.

Tranquilizers rank second to antibiotics in the number of prescriptions written, with estimated annual sales of $200,000,000.

Retail Sales Continue Upward

Total sales of retail and proprietary stores in 1958 reached an all-time high of approximately $6,600,000,000, an increase of about 4.8% over the 1957 total of $6,300,000,000. This new record was accomplished during a recession-ridden year, when most other types of retail establishments were especially hard hit by the slump in business activity.

According to U.S. Department of Commerce statistics, sales in the fourth quarter of 1958 exceeded those of 1957's fourth quarter despite the high peak of activity reached in October 1957 during the height of the influenza epidemic. This factor is particularly significant and indicates how pharmacy sales continue to spiral to new heights, even under normal conditions.

Advance reports show January 1959 sales of $579,000,000, compared with sales of $539,000,000 in January 1958. This represents an increase of about 7.0%. As-yet-unadjusted reports for February 1959 from the Commerce Department indicate sales of $549,000,000, an increase of more than 8.0% over February 1958 sales of $507,000,000.

All these indications point to another banner year for retail pharmacy in 1959.

The $7,000,000,000-per-year sales figure, not attained last year, should easily be surpassed this year.

Medical Care Index Rises

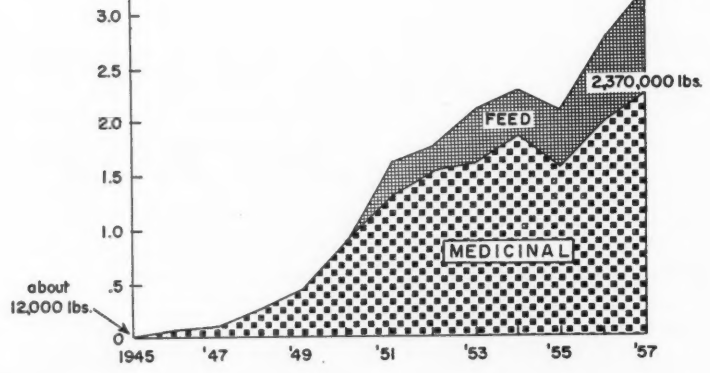
The medical care cost index of the Bureau of Labor Statistics rose to 147.6 in January 1959. By comparison, the index was 147.3 in December 1958; 143.4 in January 1958; and 103.3 in 1939 (1947–49 equals 100).

The rise in medical care costs was due to scattered reports of higher fees for professional and hospital services. Prescription and nonprescription drugs are included in the medical care cost index and represent 15.1% of this group.

CHART I

TOTAL ANTIBIOTIC PRODUCTION BY BASIC MFRS.

(SOURCE: U.S. TARIFF COMMISSION)



This Journal is the leading drug publication, read by most pharmacy students according to a recent

pharmacy image survey

by Marvin M. Smolan

DURING THE FIRST six months of 1958, a Senior Marketing Seminar at Rutgers University College (Newark) supported by a grant from Schering Corporation, Bloomfield, New Jersey, conducted a nation-wide survey among pharmacy students. The objectives of these studies were:

1. To determine the students' image of the pharmaceutical industry.
2. To determine the students' image of the leading pharmaceutical companies.
3. To gain an understanding of when and how these images are formed.

A total of 2,238 questionnaires were mailed to 53 accredited pharmacy schools. There were 1032 questionnaries returned by the students, representing a 46% response. In addition, 273 personal interviews were conducted at 5 pharmacy schools in the metropolitan New York area.

The findings of the survey are covered in a complete report published by the Marketing Seminar Group. The summary of the report which follows indicates some of the significant findings with respect to the pharmacy students' background and experience and also their views of the drug industry.

Student Readership of Pharmaceutical Journals

Publication	Freshmen	Sophomore	Junior	Senior	Average
APhA Journal	54%	65%	69%	71%	65%
Drug Topics	24	28	37	80	42
Tile & Till (Lilly)	33	40	62	30	41
American Druggist	10	15	16	62	26
Modern Pharmacy	14	20	33	16	22
NARD Journal	14	13	8	13	12

A considerable number of students enter pharmacy schools with some knowledge of the drug industry. Approximately 20% of the students have direct family ties to the drug industry. Many students (68% of the freshmen class) have had pre-college work experience in drug stores. However, despite this knowledge of the drug industry, freshmen and sophomores lack crystallized opinions of the drug industry.

It is only during the junior and senior years that better defined images of the drug industry appear to be formed. This is evidenced by the upper classmen's strong identification of companies, company promotions, and company products. By graduation the students have well-defined attitudes toward drug products and the drug industry. These conclusions, together with the finding that approximately half of the students work part time in the drug stores during the school year, indicate that their attitudes and opinions of the drug industry are formed in the drug store, as well as in the classroom.

Nearly all students read regularly one or more trade publications. The *APhA Journal* is the leading drug publication, read by most pharmacy students. The seniors, in addition, indicate high readership of *Drug Topics* and *American Druggist*. Of considerable interest is the finding that a drug company publication, Lilly's *Tile and Till*, rates high on the list of publications read by pharmacy students. (See the Table).

When asked to name the first 5 drug companies that occurred to them, the students listed or named the following five companies most often: Lilly; Parke, Davis; Upjohn; Abbott, and Merck Sharp & Dohme. The findings of the survey indicate a direct correlation between the company's promotional efforts towards students and the resultant company images. Lilly, Parke, Davis, Abbott, and Upjohn, which are recognized as promoting to students most extensively, rank highest in terms of company identity.

The students indicate that the most effective means of company promotion are lectures (detailing), scientific presentations (visual aids, etc.), and company tours. The last mentioned item was especially noted in the personal interviews conducted among students of the New York metropolitan area.

It was evident from the personal interview replies that pharmacy students believe the drug manufacturers direct too much of their detailing and advertising efforts at the doctor and not enough toward the pharmacists. Although the students were highly complimentary when asked about specific drug companies, their opinions of the drug industry as a whole were more critical. They termed the drug companies as "too commercial," "excessive profits," "not enough research," and "too much product duplication." These opinions were in contrast to the students' image of an ideal drug company. The major qualities desired by the students were "quality drugs" and "original research." "Informative advertising" and "best detailmen" were secondary attributes of an ideal company desired by the students interviewed.

It was clearly evidenced by the study that various factors such as the region of the United States, family influence, and all drug store experience are strong influences in molding students' opinions and attitudes towards the drug industry. Time did not permit such a detailed analysis, and it is suggested that this information should be obtained at some future date to measure the influence of these factors upon pharmacy students. ■

MARVIN M. SMOLAN, Senior Market Research Analysist for Schering Corporation, Bloomfield, New Jersey, and a member of the Coadjutant Staff at Rutgers University College, teaches courses in Marketing, Marketing Research, and Consumer Behavior. A graduate of the University of Wisconsin, he also has an M.B.A. degree from New York University Graduate School of Business. Mr. Smolan is a member of the editorial staff of the *Journal of Marketing* of the American Marketing Association.

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☐ Elix. 16 oz. ☐ Elix. 1 gal. ☐ Extentabs 100's ☐ Extentabs 500's

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College Equipment Available[1]

Government surplus equipment suitable for use in teaching science and mathematics is currently declared surplus at the rate of about $100,000,000 in initial value each year. Although the equipment is available to colleges and universities and to public, parochial, and nonprofit private schools throughout the country, only about 20% of the scientific items actually find their way into educational institutions.

Schools that have picked up scientific surplus property have put it to good use in science and mathematics teaching; but there are many more schools that apparently are unaware of the kinds of equipment that they can obtain simply by paying warehousing and transportation costs.

This equipment ranges all the way from push buttons for second graders to jet airplanes for engineering students. It includes nautical and navigation instruments; radio and radar equipment; electric motors and generators; photographic equipment; spectrometers; laboratory items and supplies, including chemicals; lenses; and electronic items and components.

A large part of this equipment comes from the Department of Defense, where it has been used in research laboratories, in training personnel, or in actual operations throughout the country. Other items come from the Atomic Energy Commission, from the laboratories of the Department of Agriculture, from the Veterans Administration, and from other Federal agencies. Many of the items are in the original packing cases.

That scientific equipment could be equally valuable to schools and colleges generally—if they know of its existence—is shown by the fact that it is constantly being bought up by dealers, after it has gone begging for a sufficient length of time, and then is resold to schools.

All that is needed is more information about what is available in the surplus property warehouses and greater initiative on the part of the schools themselves.

A school can obtain much useful equipment for its science and mathematics courses simply by:

1. Getting in touch with the State surplus property agency (every State has one) and establishing the school's eligibility.
2. Sending the appropriate personnel to the warehouse to see what is actually available or likely to be coming in.
3. Informing each science or mathematics teacher what is available and at the same time obtaining a list of items that each teacher would like to have for his classes.
4. Providing the State agency with a list of desired items so that the State agency can be on the lookout for them as they become surplus.

In many instances it is simply a matter of backing the school bus or station wagon up to the loading platform of the warehouse, picking up previously selected items and driving off with them.

[1] Released at News Conference recently held by Secretary Arthur S. Flemming of the Department of Health, Education, and Welfare, Washington, D.C.

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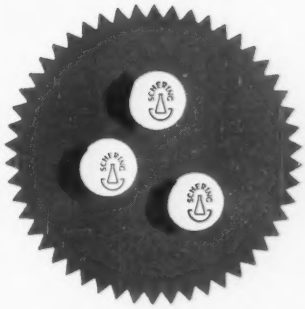

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Agaricus Oligoplex and Tarantula Oligoplex

What are Agaricus Oligoplex and Tarantula Oligoplex and are they available in the U.S.?—W. B. H., California.

"Gehes Codex," Vol. 8, 1953, lists Agaricus Oligoplex as a combination of: Agaricus D_4, Arsen. alb. D_4, Hyoscyam. D_4, Zizia aurea D_3. Use: Chorea minor. Form: Liquor. Tarantula Oligoplex is listed (*ibid.*) as a combination of: Tarant. D_6, Cicuta vir. D_4, Juglans D_3, Melissa D_2, Oenanthe croc. D_3, Zinc. hypophosphor. D_4. Use: Gleichgewichtstörungen, Chorea minor, Scheitelkopfschmerzen. Form: Liquor.

These products appear to be homeopathic preparations. Apparently the "D_4" is a German style of indicating the number of dilutions instead of our homeopathic system of using the times sign. The U.S. Homeopathic Pharmacopoeia includes extracts of Tarantula. [*Editor's note:* Information on a U.S. source would be appreciated.]

Alkylating Agents in Cancer

We would appreciate a definition of the term "alkylating agent" used in the discussion of cancer therapy drugs such as thio-TEPA and Myleran. The chemical definition does not provide the answer. —R. D. A., Virginia.

The term "alkylating agent" used in a biological sense is not very different from the chemical definition. In a discussion on "Chemotherapy in Cancer," Dr. D. A. Karnofsky, *Modern Med.*, **26,** 83(Dec. 1, 1958), stated: "Chemicals in the group of polyfunctional alkylating agents characteristically have two or more reactive groups and are thus able to introduce alkyl groups into materials of biologic importance."

Disodium Versenate

An ophthalmologist wants a solution of Disodium Versenate. Where can we obtain the chemical to make the solution?—J. R. L., Pennsylvania.

Although the terminology for Versene and Versenate compounds is confusing, recent usage seems to indicate that disodium versenate is the disodium salt of ethylenediaminetetraacetic acid (EDTA), a chelating agent which forms stable complexes with many metals. This compound is available from: J. T. Baker Chemical Co., Phillipsburg, N.J. (as Na_2 EDTA); Geigy Industrial Chemicals, 89 Barclay St., New York 8, N.Y. (as Sequestrene NA2, in 3 grades of purity); Refined Products Corp., Lyndhurst, N.J. (as the disodium salt of Perma Kleer-50); Glyco Products Co., Inc., Empire State Bldg., New York 1, N.Y. (as the disodium salt of Tetrine).

The NND generic name for EDTA is edathamil and an ophthalmic solution of edathamil disodium, 0.37% or 1.85%, with sodium bicarbonate (0.1%) is marketed as Prochelate solution by Iso-Sol Co., Inc., 120 E. Hoffman Ave., Lindenhurst, N.Y. The solution is recommended as a chelating agent for calcium compounds accidentally placed in the eye.

Effervescent Powder

How should the following prescription from Amsterdam be compounded?—M. F., Washington, D.C.

Tartaric acid	63
Sod. bicarbonate	11
Mag. carbonate	25
Dried yeast	2

The dried ingredients can be dispensed as a mixed powder or as effervescent granules. The procedure given for effervescent sodium phosphate N.F. could be used with the addition of about 1.5% water or diluted alcohol to the mixed powders before heating. This would supply the moisture for making the mass. The hydrous form of citric acid supplies the moisture in the N.F. product.

Botkin's effervescent powder, U.S. S.R. VIII contains sodium bicarbonate 6.5, tartaric acid 6, and exsiccated sodium sulfate 2. The directions for mixing, which could be applied to the above prescription, are: Mix the tartaric acid with the sodium sulfate ($MgCO_3$ and yeast above), pass through a sieve and add the sodium bicarbonate. The final product should be dispensed in a tight container and the patient should be directed to keep the contents dry.

Elipten

A physician requests information on Elipten. Please help.—M. P., Washington, D.C.

Elipten is a glutarimide derivative with anticonvulsant activity. It is available for clinical studies from Ciba Pharmaceutical Products. A note in *Unlisted Drugs*, Dec. 1958, refers to a report in which Elipten appears in *Diseases of Nervous System*, **19,** 349 (Aug. 1958).

Griseofulvin

A physician requests information on griseofulvin, particularly a source of material for internal use.—M. A., Virginia.

A study in which griseofulvin given in daily oral doses of 60 mg./Kg. in the treatment of experimentally induced ringworm in guinea pigs was reported by J. C. Gentles, *Nature*, **182,** 476(1958). He noted that beneficial effect of treatment was observed clinically within 4 days. Dr. H. Blank, *et al.*, *AMA Arch. Dermatol.*, **79,** 259(1959), report favorable results with 1–5 Gm. daily oral dosage with griseofulvin in dermatomycoses. The griseofulvin was obtained from Glaxo Labs. Ltd., Greenford, Middlesex, England. U.S. sources may be Schering and J. & J.

NIH 7519—Analgesic

A physician wants to know when he can obtain the analgesic NIH 7519. Can you give us any information?—J. G., Maryland.

The only authoritative information about the synthetic analgesic NIH 7519 was released by A. S. Flemming, Secretary, HEW, Jan. 13, 1959. The drug, 2′-hydroxy-5,9-dimethyl-2-phenethyl-6,7-benzomorphan hydrobromide, was developed at NIH (National Institutes of Health) with rights assigned by Drs. E. L. May and N. B. Eddy to the U.S. Government. In tests on laboratory animals the drug appeared to be 10–20 times as potent an analgesic as morphine and 50 times as potent as codeine, while with human patients after surgery satisfactory pain relief was obtained with one-tenth as much NIH 7519 as would be required of morphine. Trials in more than 200 humans indicate the drug is addicting but the degree of addiction liability is lower and its safety factor appears to be higher than with morphine. It was stressed that NIH 7519 is still in the experimental and clinical testing stage. The drug is now produced by Smith Kline & French Laboratories which also conducts toxicity studies and clinical pain relief trials for NIH. Secretary Flemming indicated that other drug manufacturers are considering producing the drug.

Progress in Medicine

Acetazolamide in Epilepsy

Clinical trials of acetazolamide (Diamox) given orally to 56 children (3 months to 6 yrs.) who had been suffering epileptic attacks gave encouraging results report Drs. J. Holowach and D. L. Thurston, *J. Pediatrics*, **53**, 160(1958). The physicians found that 35 of the children experienced complete remissions; 19 of these had been observed 2 to 20 months, 16 others had no attacks for periods up to 19 months before recurrence. Nine additonal patients showed some improvement, while 12 cases were unchanged during acetazolamide therapy.

Chlorothiazide Therapy

A study of the use of chlorothiazide in the treatment of hypertension, reported by Dr. E. D. Freis, *J. Am. Med. Assoc.*, **169,** 105(1959), is summarized as follows:

"When chlorothiazide is used, lower and, hence, less toxic dosages of other hypertensive agents become effective in controlling blood pressure. Chlorothiazide does not reduce blood pressure in normotensive subjects although the drug induces the same increase in salt excretion. Regarding the mechanism of antihypertensive effect of chlorothiazide, it may be tentatively concluded that the blood pressure reduction accompanies the salt loss and probably is a consequence of it. When chlorothiazide is added to the regimen of a patient taking ganglionic blocking agents, the dosage of the latter must be reduced by half. The responsiveness of the patient is so remarkably increased by chlorothiazide that, if full dosage is continued, severe hypotension, including postural collapse usually will occur. The other so-called toxic reactions to chlorothiazide are only extensions of its fundamental saluretic and kaluretic actions. Hypopotassemia is frequent, and potassium supplements should be used when this develops."

The diuretic effects of chlorothiazide in 4 groups of patients with various degrees of congestive heart failure are reported by Drs. J. W. Keyes and F. J. Berlacher, *ibid.*, p. 109. All but 2 of their 50 patients were fully digitalized, and all were being kept on diets yielding 1 Gm. of sodium chloride per day. The usual dose for long-term therapy was found to be 250 or 500 mg. given thrice daily by mouth at roughly six-hour intervals for three or four consecutive days a week. Some individualization was necessary. Three case histories illustrate the gratifying results obtained in some patients; a fourth illustrates the fact that patients resistant to mercurial diuretics are generally resistant to chlorothiazide also. Under the conditions of this study, with the use of ammonium chloride and potassium chloride when indicated, no serious electrolyte imbalance occurred, and patients remained free from gastrointestinal and neurological symptoms of toxicity.

Based upon the established usefulness of diuretics for control of premenstrual tension, Dr. E. C. Jungck, *et al.*, *ibid.*, p. 112, administered chlorothiazide in doses of 0.51–1 Gm. daily for 7–10 days before menses to 50 women with complaints referable to the premenstrual tension syndrome. Of the 50 patients, 33 complained of swelling. All of these patients showed an excellent response to chlorothiazide, with complete relief from their edema. Breast tenderness was a problem for eight patients, and, in each instance, the tenderness was relieved by chlorothiazide therapy. Headache was a presenting symptom in four patients, two of whom were relieved and two of whom noted no change while on chlorothiazide therapy.

Chlorothiazide-Reserpine in Hypertension

Observations on 24 patients with essential hypertension and one with chronic glomerulonephritis who were given twice daily oral tablets containing 500 mg. chlorothiazide and 0.125 mg. reserpine during a 4-month period are reported by Dr. H. E. Nussbaum, *et al.*, *Am. J. Med. Sci.*, **236,** 786(1958). The report states:

"It is apparent . . . that chlorothiazide is an effective diuretic agent. . . . While several investigators have demonstrated significant hypotensive effects with chlorothiazide, we have not been as impressed as they. Admittedly, chlorothiazide does have mild hypotensive effects in some patients, but such effects do not occur frequently enough and are not marked enough to warrant the routine use of chlorothiazide for the treatment of hypertension. It is significant to note, however, that normotensive patients do not show any hypotensive responses to the drug. Based upon our experiences to date, it does appear that chlorothiazide is a useful drug when used in combination with other hypotensive agents. We do not believe that its effects are related to alterations in salt metabolism alone, but may possibly be due in part to a direct hypotensive action. It is entirely possible that the apparent potentiating effect sometimes observed when chlorothiazide is administered with another hypotensive agent may be due to a delay in excretion of the hypotensive agent caused by chlorothiazide. Certainly chlorothiazide offers many advantages both as a diuretic agent and as a hypotensive in patients with congestive heart failure. It is well tolerated, effective, and has been singularly free of serious side effects thus far."

DBI (Phenformin), Oral Hypoglycemic Drug

A symposium on the latest laboratory and clinical tests with the oral hypoglycemic agent phenformin (DBI, β-phenethylbiguanide) (U.S. Vitamin & Pharm. Corp.) includes trials, on relatively small groups of diabetics, of the drug alone and in combination with insulin or with tolbutamide (Orinase). Dr. H. Dolger notes that use of DBI in full therapeutic dosage may be limited because of disturbing side-reactions, but that suboptimal amounts of DBI (25 mg. twice daily) can be effective and free from side-reactions when added to the maximal existing dose of tolbutamide. He found that 25 patients, primary failures with tolbutamide, obtained control of diabetes; and 75 patients with secondary failure (poor response to tolbutamide after an initial successful therapeutic period of several months) regained excellent control with the combined therapy. Eventually the daily dose of tolbutamide could be reduced to 1 Gm. daily along with 50 mg. of DBI. Results are reported in other study groups with diabetes mellitus, and brittle adult and juvenile diabetics. Clinical studies are being continued. A note on earlier reports on DBI appeared in THIS JOURNAL, **18,** 561 (1957).

Demethylchlortetracycline—Preliminary Studies

Given orally in single 250-mg. doses, demethylchlortetracycline was well tolerated by 16 normal human subjects, and was well absorbed from the gastrointestinal tract to produce prolonged sreum antibiotic concentration (probably due to slow excretion by kidneys), according to W. M. Sweeney, *et al.*, *Antibiotics & Chemotherapy*, **9,** 13(1959). They report the compound is relatively stable compared with the tetracyclines now in clinical use and it has a high order of activity against bacterial test organisms. They recommend its trial against sensitive microbial infections in man.

Continued on page 220

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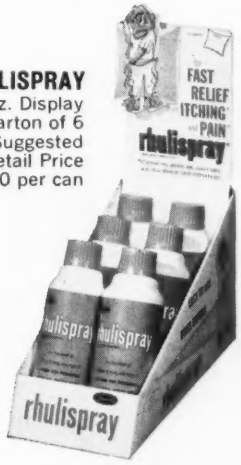

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Progress in Medicine Continued from page 218

Electrolyte Losses In Chronic Purgation

A report on 3 cases in which chronic purgation caused excessive loss of sodium, potassium, and water in the feces and resulted in electrolyte-deficiency states is given by Dr. N. F. Coghill, *et al.*. *Brit. Med. J.*, **1,** 14 (1959). After studies by chemical and radioisotope methods, the inadequate knowledge of the action of common purges on the intestine is noted. The evidence in the reported cases suggests to the physicians that "irritant" purges may exert an action on the small intestine.

Penicillin Urticaria from Dairy Products

Allergic reactions due to penicillin in dairy products are cited in 4 cases by Dr. M. C. Zimmerman, *AMA, Arch. Dermatol.*, **79,** 1(1959). Evidence given includes clearing of repeated allergic reactions by injection of penicillinase. Dr. Zimmerman suggests that more stringent efforts should be made to eliminate penicillin contamination of milk in the U.S. He states:

"Patients with chronic urticaria where penicillin sensitivity is suspected should be given a test injection of penicillinase. If urticaria clears for four to seven days, penicillin sensitivity was probably the cause. Patients with chronic urticaria, where penicillin sensitivity is proved or suspected, should have dairy products, ice cream, and Roquefort or bleu cheeses containing *Penicillium* species molds eliminated from their diets. If patients have a flare-up four to seven days after a penicillinase injection, there is residual penicillin in the system which has not been destroyed. Penicillinase injections should be repeated at four- to seven-day intervals, as necessary, to stop symptoms. If more than eight days pass before a new outbreak of allergic symptoms after an injection of penicillinase, then the penicillinase had destroyed all the penicillin in the system at that time. The new outbreak suggests that the patient either has had a new exposure to penicillin or that his new reaction is due to some other allergen."

Trimethidinium in Hypertension

Trimethidinium methosulfate (Ostensin, Wyeth), administered orally 60–520 mg. daily to 38 severely hypertensive patients for 3–11 months, was considered to be an effective antihypertensive agent by Dr. R. A. Dunsmore, *et al.*. *Am. J. Med. Sci.*, **236**, 483(1958). The average diastolic fall was 32 mm. Hg and 37% of the group were maintained with consistent normotensive levels; while 58% showed less consistent normotension. The drug action appears to involve ganglionic blockade primarily, although an additional central action is suggested. Side-effects are similar to those of other ganglionic blocking agents, but with reduced effects on the gastrointestinal tract. The physicians found reserpine and chlorothiazide to be synergistic with trimethidinium.

Vitamin E in Intermittent Claudication

A study of 2 groups of 20 patients with intermittent claudication who were given (Group 1) 600 mg. vitamin E daily (3 200-mg. tablets orally) for 40 weeks or (Group 2) placebo tablets, showed 13 out of 17 improved with the drug, whereas 2 out of 17 improved on placebo (3 dropped out in each group due to complications), according to P. D. Livingstone and C. Jones, *Lancet*, **2,** 602 (1958). They conclude that vitamin E therapy with large dosage confers benefit in some cases.

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Acetyl Sulfamethoxypyridazine

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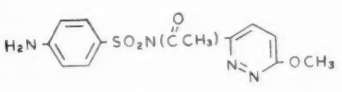


Acetyl Sulfamethoxypyridazine

Actions and Uses. Acetyl sulfamethoxypyridazine has the same actions and uses as the parent sulfonamide, sulfamethoxypyridazine, except that it is tasteless and is therefore better suited to pediatric use as a liquid medication. (See the monograph on sulfamethoxypyridazine.)

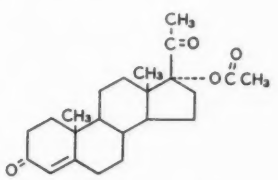
Dosage. Acetyl sulfamethoxypyridazine is administered orally. The dose for children is 250 mg. for each 20 lb. (9 Kg.) of body weight and is given immediately after a meal on the first day. Thereafter, the dose is 125 mg. per 20 lb. of body weight, given immediately after a meal once daily or, alternatively, 250 mg. per 20 lb. of body weight every other day. For children weighing 80 lb. (36.3 Kg.) or more and for adults, the dose of acetyl sulfamethoxypyridazine is the same as for the unacetylated drug, sulfamethoxypyridazine.

Preparations: suspension (oral) 25 mg. per cc.

Hydroxyprogesterone Acetate

Prodox (Upjohn); 17α-Hydroxyprogesterone acetate.

Actions and Uses. Hydroxyprogesterone acetate is an esterified derivative of hydroxyprogesterone. In contrast to progesterone, which is virtually inactive by the oral route, hydroxyprogesterone acetate causes pronounced progestational effects after oral administration. Typical effects include production of secretory changes in an estrogen-primed endometrium, luteal changes in exfoliated vaginal epithelial cells, suppression of the formation of fern-like patterns in the cervical mucus (arborization), increases in basal body temperature, and induction of endometrial withdrawal bleeding after endogenous or exogenous extrogenic stimulation. On the basis of both laboratory and clinical studies, hydroxyprogesterone acetate appears to be considerably more potent as a progestogen than are equal amounts of orally given ethisterone. Its onset and duration of action are approximately the same as with parenterally administered progesterone; withdrawal bleeding from an estrogen-primed endometrium generally occurs within two to three days after the oral administration of about 100 mg. The drug produces only minimal estrogenic responses and shows no androgenic activity.



Hydroxyprogesterone Acetate

Hydroxyprogesterone acetate is useful in all conditions in which parenterally administered progesterone or hydroxyprogesterone caproate is indicated. (See the monograph on hydroxyprogesterone caproate in NND). Thus, it may be given for the treatment of primary or secondary amenorrhea, for functional uterine bleeding in patients with diagnosed benign endometrial hyperplasia, and in cases of infertility believed to be due to inadequate corpus luteum function. The drug may also be employed during the first and second trimesters in patients with a history of habitual abortion. There is inadequate evidence at hand to justify the routine employment of hydroxyprogesterone acetate, or any other progestogen, for the treatment of dysmenorrhea or premenstrual tension.

Hydroxyprogesterone acetate appears to be well tolerated. In the clinical studies to date, no significant untoward effects have been reported.

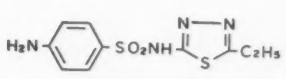
Dosage. Hydroxyprogesterone acetate is administered orally. For amenorrhea, functional uterine bleeding, and infertility, the usual dosage ranges from 25 to 50 mg. per day. This amount is taken either for 5 successive days beginning on the 21st day of the menstrual cycle or for 20 successive days beginning on the 5th day of the menstrual cycle. Supplemental estrogen therapy may also be instituted in patients who fail to produce adequate amounts of endogenous estrogen. The proposed dosage for habitual abortion is 200 to 400 mg. daily until fetal viability is evident.

Preparations: tablets 25 mg. and 50 mg.

Sulfaethidole

Sul-Spansion, Sul-Spantab (S K & F); N^1-(5-Ethyl-1,3,4-thiadiazole-2-yl) sulfanilamide.

Actions and Uses. Sulfaethidole is identical in chemical structure to sulfamethizole except that it contains an ethyl rather than a methyl group at the 5 position of the thiadiazole ring. It is, however, a much longer acting drug than sulfamethizole although its spectrum of activity is the same. The drug is useful for the treatment of systemic and urinary tract infections due to organisms sensitive to the bacteriostatic action of sulfonamides. It is readily absorbed from the gastrointestinal tract but does not undergo an appreciable degree of acetylation in the body; about 90 to 95% of the total blood and urine sulfonamide appears as the free form. Both the free and the conjugated forms of sulfaethidole are soluble in urine over a wide pH range. Hematuria, crystalluria, and other indications of renal toxicity have been rarely encountered during therapy with this compound. Because the drug is prepared in a sustained release form, therapeutic blood levels usually can be maintained for a sufficiently long time to necessitate oral administration only once every 12 hours.



Sulfaethidole

The side-effects to be expected with sulfaethidole are the same as with other sulfonamides. However, the incidence of such side-effects—renal, systemic, or dermal—has been much lower. Serious side-effects, such as granulocytopenia and hemolytic anemia, have not been reported to date. Sulfaethidole is contraindicated only in patients with known sulfonamide sensitivity. (See the general statement on sulfonamide compounds in NND.)

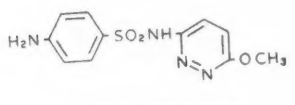
Dosage. Sulfaethidole is administered orally. The average maintenance dose for aduts is 1.3 Gm. every 12 hours. This dose may be increased by one-third (1.95 Gm.) in severe infections, or decreased one-third (650 mg.) for prophylaxis. The average maintenance dose for children is 330 mg. per 25 lb. (11 Kg.) of body weight every 12 hours. This dose may be doubled in severe infections or halved for prophylaxis Initial (priming) doses should be double the maintenance doses.

Preparations: suspension (sustained release, oral) 130 mg. per cc.; tablets (sustained release) 650 mg.

Sulfamethoxypyridazine

Kynex (Lederle), **Midicel** (P.-D.); N^1-(6-Methoxy-3-pyridazinyl)sulfanilamide.—3-Sulfanilamido-6-methoxypyridazine.

Actions and Uses. Sulfamethoxypyridazine is of value for the chemotherapy of urinary tract infections and systemic infections due to micro-organisms susceptible to the bacteriostatic action of sulfonamides. The drug is rapidly absorbed from the gastrointestinal tract and is conjugated to a minimal degree in the body; 40 to 70% of the total blood sulfonamide is present in the acetylated form;



Sulfamethoxypyridazine

30 to 60% of the administered dose is excreted in the urine in the free form. Sulfamethoxypyridazine is distinguished from other sulfonamides by its exceptionally slow rate of excretion. Maximum blood levels are reached within a few hours after the oral administration of 1 Gm., and this high level is maintained for about 10 hours. Thereafter, blood levels fall slowly; at the end of 24 to 48 hours, blood levels are about half of the maximum. After 96 hours they reach one-eighth to one-fourth the maximum levels. Because of this long duration of action, lower dosage and less frequent administration are required than with other sulfonamides.

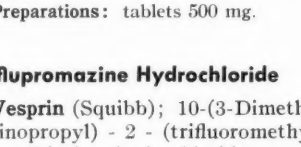
Except for a diminished incidence of renal toxicity, the same general type of side-effects and untoward reactions may be expected with sulfamethoxypyridazine as with other sulfonamides. Hence, the drug should be used with the same precautions and is subject to the same contraindications as other agents of this class.

Dosage. Sulfamethoxypyridazine is administered orally. Since it produces high, prolonged blood levels, it is imperative that the recommended doses, which are much lower than with other sulfonamides, are not exceeded. For mild to moderate infections, the initial dose for adults is 1 Gm. the first day, followed by 500 mg. every day thereafter or 1 Gm. every other day. In severe infections, as much as 2 Gm. may be given to adults on the first day, followed by 500 mg. every 24 hours. Dosage for children is reduced in proportion to body weight. Therapy should be continued for five to seven days or until the patient is asymptomatic for 48 to 72 hours.

Preparations: tablets 500 mg.

Trifluprazine Hydrochloride

Vesprin (Squibb); 10-(3-Dimethylaminopropyl) - 2 - (trifluoromethyl)-phenothiazine hydrochloride.



Trifluprazine Hydrochloride

Actions and Uses. Trifluprazine HCl is identical in chemical structure to chlorpromazine HCl except that it contains a trifluoromethyl group rather than a chlorine atom at the 2 position of the phenothiazine ring. It is perhaps more closely allied in actions and uses to chlorpromazine than any of the other phenothiazine derivatives currently in use. Equivalent pharmacological and clinical responses can be elicited with doses of trifluprazine that are less than those of chlorpromazine, thus indicating a greater potency for the former compound.

Trifluprazine is useful as an adjunct to the management of various acute and chronic psychoses, particularly those associated with excessive psychomotor activity and overt hostility as in schizophrenia, mania, senile and toxic psychoses, and in alcoholism. The drug is reported to ameliorate such psychic symptoms as hallucinations and delusions and to control agitation, anxiety, tension, panic, hostility, and aggressiveness in appropriate cases. It is also of value in facilitating rapport with the psychiatrist and making the patient more amenable to psychotherapy. The drug should not be given to patients with depressive-obsessive states, nor is it intended for use in simple neuroses of relatively minor emotional disorders. In common with other phenothiazine compounds, trifluprazine exerts a significant antiemetic effect and is effective for the control of nausea and vomiting of varied etiologies.

In general, trifluprazine seems to compare well with chlorpromazine, with respect to the over-all incidence of side-effects and untoward reactions. Phenothiazine-induced jaundice associated with trifluprazine has been exceptionally rare. Only one reported instance of granulocytopenia associated with the administration of trifluprazine has been reported. In view of the phenothiazine structure of trifluprazine, physicians using this drug should be alert to signs of hematopoietic depression; routine blood cell counts are advisable during therapy. Excessive sedation and drowsiness are apparently less with trifluprazine than with chlorpromazine; hypotension and tachycardia may also occur somewhat less frequently. The most common side-ffeect to the drug is a parkinsonian syndrome, with motor disturbances and extrapyramidal symptoms. This reaction generally subsides upon reduction in dosage and/or administration of an antiparkinsonian drug. Other reported side-effects include blurring of vision, dizziness, nausea, epigastric distress, weakness, weight gain, insomnia, allergic reactions, and photosensitivity. Trifluprazine is contraindicated in patients under the influence of large amounts of alcohol, barbiturates, or opiates.

Dosage. Trifluprazine HCl is administered orally and, occasionally, intramuscularly or intravenously. Optimal dosage varies from patient to patient and should be determined on an individual basis. For adults, the usual initial oral dose is 25 mg. three times daily. This dose may then be increased gradually until a satisfactory clinical response has been obtained or until side-effects become a problem. For children and geriatric patients, the usual oral dose is 10 mg. three times a day.

For rapid effect in severely agitated patients or in severe nausea and vomiting, trifluprazine hydrochloride may be given parenterally. Dosage by the i.m. route ranges from 20 to 50 mg. three times a day; single i.v. doses range from 2 to 10 mg. Oral therapy should be substituted for parenteral injection as soon as feasible.

Preparations: emulsion (oral) 10 mg. per cc.; solution (injection) 20 mg. in 1 cc.; tablets 10, 25, and 50 mg.

SUPPLEMENTAL STATEMENT

Use of Nicotinic Acid in Hypercholesteremia

The Council was requested to evaluate the usefulness and safety of large oral doses of the vitamin, nicotinic acid (niacin), for the treatment of hypercholesteremia. The rationale for such use of the drug stems from the statistical relationship which is commonly accepted to exist between elevated serum cholesterol levels and the clinical manifestations of atherosclerosis. There seems to be little doubt that nicotinic acid, when given in large doses to hypercholesteremic subjects, will frequently bring about a marked reduction in cholesterol levels; the lowering of cholesterol is less impressive in subjects with normal or near normal levels. Theoretically, sustained reduction of circulating cholesterol levels appears to be desirable. However, to date, there is no valid evidence that lowered blood cholesterol levels cause clinical improvement of the patient. Although the large doses of nicotinic acid (3 to 6 Gm. per day) employed for the treatment of hypercholesteremia have not been associated with serious toxic effects, the possibility of adverse reactions should be kept in mind. Pending the accumulation of evidence to show a bona fide beneficial effect in patients, either from the viewpoint of prophylaxis or therapy of atherosclerotic cardiovascular disease, the use of nicotinic acid for purposes other than the prevention or treatment of pellagra must be considered experimental.

Prescription Practice

New Prescription Products

Enarax Tablets

Description: Each black and white, scored tablet contains 10 mg. oxyphencyclimine HCl (Daricon) and 25 mg. hydroxyzine (Atarax).

Indications: Management of peptic ulcers and allied gastrointestinal disorders.

Administration: 0.5–1 tablet twice daily.

Form Supplied: Round amber bottles of 60.

Source: J. B. Roerig & Co., New York 17, N.Y.

Endrate Disodium for Inj.

Description: Each ampul contains 3 Gm. Endrate (edathamil) disodium (disodium ethylenediaminetetraacetate; Na_2EDTA). The compound unites with most metal cations to form chelates (ring complexes).

Indications: In pathologic calcification. Clinical reports indicate a beneficial action in the management of intractable angina pectoris, scleroderma, and porphyria. There is evidence that edathamil disodium is an effective agent for the treatment of digitalis intoxication.

Administration: 50 mg./Kg. of body weight/day. The required volume of Endrate disodium solution should be diluted with 500 cc. of 5% dextrose in water or with isotonic saline and administered by i.v. infusion during a period of not less than 2.5 hrs. Usual infusion time is 3 to 4 hrs. Total number of days of treatment depends on individual cases. Usual regimen is daily i.v. infusion for 5 days followed by 2 days without edathamil disodium. This cycle is repeated 3 times, then i.v. administration should be omitted for several weeks while the results are being assessed. Precautions: Hypocalcemia represents a theoretical danger to the patient under treatment with edathamil disodium. Since the drug may act as an irritant to the tissues, care must be taken to avoid extravascular infusion. When large areas of metastic calcium involve the internal wall of the heart or large or vital arteries, caution should be exercised to avoid calcium embolism. Urinalysis should be performed frequently during treatment; any untoward findings are an indication for withdrawal of the drug. If clinical evidence suggests any disturbance of liver function, appropriate laboratory tests are indicated. It is strongly recommended that edathamil disodium should not be administered to a patient with renal disease.

Form Supplied: 3 Gm., in 20-cc. ampuls, in boxes of 5.

Source: Abbott Laboratories, North Chicago, Ill.

Esidrix Tablets

Description: Each scored tablet contains 25 mg. (pink) or 50 mg. (yellow) of Esidrix (hydrochlorothiazide; 6-chloro-3,4-dihydro-7-sulfamyl - 2H - 1,2,4 - benzothiadiazine 1,1-dioxide), a diuretic-antihypertensive 10–15 times more potent than chlorothiazide.

Indications: In congestive heart failure, nephrosis, toxemia of pregnancy, edema of pregnancy, premenstrual tension and steroid-induced edema; in all grades and most types of hypertension, and as an adjunct in the treatment of obesity.

Administration: Orally, 75–100 mg. daily with a range of 25–200 mg. given as a single dose in the morning or in divided doses 2–3 times daily. Can be given with other antihypertensive drugs whose dosages can often be reduced.

Form Supplied: Both strengths in bottles of 100 and 1,000 tablets.

Source: Ciba Pharmaceutical Products Inc., Summit, N.J.

Singoserp Tablets

Description: Each scored tablet contains 1 mg. Singoserp (syrosingopine; chemically carbethoxysyringoyl methylreserpate).

Indications: Antihypertensive agent approximately equal to reserpine in ability to lower blood pressure but relatively free of side actions.

Administration: Orally. Initially 1-2 tablets daily; maintenance, 0.5–3 tablets daily. Other more potent agents may be used adjunctively with Singoserp in lower than their usual doses. With patients already on other antihypertensive drugs: add 1–2 Singoserp tablets daily, lowering dosage of other agents. Side effects of Singoserp are less frequent and milder than those of other rauwolfia drugs.

Form Supplied: Bottles of 100 tablets.

Source: Ciba Pharmaceutical Products Inc., Summit, N.J.

Sycotrol Tablets

Description: Each tablet contains 3 mg. Sycotrol (1-piperidine-ethanol benzilate HCl), a mild antiphobic and anticholinergic agent.

Indications: For control of cardiac and gastrointestinal symptoms of acute and chronic anxiety.

Administration: Orally, 1 tablet 3–4 times daily.

Form Supplied: Bottles of 100.

Source: Reed & Carnrick, Jersey City, N.J.

Triburon Ointment
Triburon-HC Ointment

Description: Triburon is N,N′-bis[1-methyl-3-(2,2,6-trimethylcyclohexyl)-propyl]-N,N′-dimethyl-1,6-hexanediamine bis(methochloride). It is available as a 0.1% ointment and also with 0.5% hydrocortisone (Triburon-HC ointment).

Indications: As a topical microbicide for control of skin and wound infections.

Administration: Either form should be rubbed gently on the affected area 3–4 times daily.

Form Supplied: Triburon ointment, 1-oz. tubes and 1-lb. jars; Triburon-HC ointment, 5-Gm. and 20-Gm. tubes.

Source: Roche Laboratories, Nutley 10, N.J.

Other New Products

Chemicals, clinical trial drugs, diagnostic aids, equipment for the retail and hospital pharmacy

Achease Tablets

Tablets containing, in each: phenyltoloxamine dihydrogen citrate, 44 mg.; acetophenetidin, 150 mg.; salicylamide, 150 mg.; and caffeine, 32 mg., are marketed by *Phila. Ampoule Labs.* for use in relief of tension headaches. Supplied in bottles of 100 and 1,000.

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All actively promoted items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information before products are detailed to the physician. For inclusion in this department, for which there is no charge, send descriptive literature to the Editor, New Prescription Products Department; JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 2215 Constitution Avenue, N.W., Washington 7, D.C.

Aristogesic Capsules

Red capsules containing, in each: triamcinolone (Aristocort), 0.5 mg.; salicylamide, 325 mg.; aluminum hydroxide, 75 mg.; and ascorbic acid, 20 mg., are marketed by *Lederle Labs.* as a steroid-analgesic product for treatment of moderate rheumatic conditions such as mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, mild spondylitis, myositis, fibrositis, neuritis, and certain muscular strains. Dosage initially 2 capsules 3–4 times daily, adjusted according to response. Supplied in bottles of 100.

Cor-Tyzine Nasal Soln. Neocor-Tyzine Nasal Soln.

Pfizer Laboratories has marketed solutions containing, in each cc.: 1 mg. tetrahydrozoline HCl (Tyzine) and 0.2 mg. prednisolone in Cor-Tyzine, with the addition of 0.6 mg. neomycin sulfate in Neocor-Tyzine. Pediatric forms of both solutions contain 0.5 mg. tetrahydrozoline HCl per cc. The solutions are indicated for relief of acute, chronic, and allergic rhinitis, sinusitis, and other inflammatory nasal conditions. Dosage: 2–4 drops of nasal solution in each nostril every 3–4 hrs.; children, 1–3 drops of pediatric nasal drops every 3–4 hrs. The 4 solutions are supplied in 15-cc. bottles.

C-Ron Pediatric Tabs.

Chewable tablets containing, in each: 50 mg. vitamin C and 100 mg. ferrous fumarate are marketed by *Rowell Labs.* for pediatric use in iron deficiency anemia. Supplied in bottles of 100 and 1,000.

Cyclogyl Solution 2%

Schieffelin & Co. has marketed its rapid-acting and rapidly reversible cycloplegic (causes paralysis of accommodation) Cyclogyl (cyclopentolate HCl) in a 2% ophthalmic solution containing polyvinylpyrrolidone, for use in highly pigmented eyes. The 0.5% and 1% solutions also are available. The 2% solution is supplied in 2-ml. and 7.5-ml. dropper bottles.

Demerol Compound Tablets

Stratified tablets containing, in each: Demerol (meperidine) HCl, 25 mg. (white center layer); dihydrocodeinone bitartrate, 5 mg. (green layer); and acetyl-*p*-aminophenol (acetaminophen), 150 mg. (pink layer), have been marketed by *George A. Breon & Co.* for symptomatic relief of pain, cough, and fever accompanying upper respiratory infections. Dosage: 1–2 tablets. Supplied in bottles of 100.

Denylex Gel Injection

A parenteral repository gel containing, in each cc.: adenosine-5-monophosphate, 25 mg.; vitamin B_{12}, 150 mcg.; and niacin, 10 mg., in 17% gelatin solution with 1.5% benzyl alcohol, is marketed by *Lloyd, Dabney & Westerfield,* for intramuscular use in neuromusculo-skeletal disorders. Dosage, 1 cc. by i.m. injection only. Supplied in 10-cc. multiple-dose vials.

Guaiafage Injection

A solution containing, in each cc.: guaiacol, 25 mg.; cacodylic acid, 12.5 mg.; foreign protein, 20 mg.; and benzyl alcohol 1%, in an aqueous vehicle, is marketed by *Meyer and Co.* for use as an injectable expectorant for drainage of respiratory passages and for nonspecific protein therapy. Dosage is 2 cc. injected daily as necessary. Supplied in 10-cc. multiple-dose containers.

Kenalog-S Lotion

E. R. Squibb & Sons has marketed a lotion containing 0.1% Kenalog (triamcinolone acetonide) with Spectrocin (neomycin-gramicidin) for relief of itching, burning or inflamed skin lesions in atopic, seborrheic, or contact dermatitis, neurodermatitis, and other eczematous dermatoses amenable to topical corticosteroid-antibiotic therapy. Supplied in 7.5-cc. squeeze bottles.

Neo-Delta-Cortef w/Tetracaine Eye-Ear Drops (Vet.)

A suspension containing, in each cc.: prednisolone acetate, 2.5 mg.; neomycin sulfate, 5 mg.; and tetracaine HCl, 5 mg., is marketed by *Upjohn Co.* for veterinary use in certain acute ocular inflammations and in otitis externa. Supplied in 2.5-cc. plastic dropper bottles.

Noludar 300 Capsules

Roche Laboratories has marketed Noludar, a nonbarbiturate hypnotic, in 300-mg. capsules (amethyst and white) in bottles of 100 and 500.

Pecto-Kalin w/Neomycin

A suspension containing, in each 30 cc., 300 mg. neomycin sulfate, with pectin and kaolin, is marketed by *Paul Maney Labs.* for use in the treatment of diarrhea. Dosage, 2–4 tablespoonfuls 4 times daily. Warning: High dosage levels and prolonged administration should be avoided in view of possible systemic effects. If signs of kidney damage appear, discontinue use. Supplied in bottles of 4 oz. and 16 oz.

Planplex Capsules (Vet.)

Peach and blue colored capsules containing, in each: Panmycin phosphate equivalent to tetracycline HCl, 50 mg.; novobiocin sodium, 50 mg.; nystatin, 50,000 u.; and penicillin G potassium, 100,000 u., are marketed by *Upjohn Co.* for veterinary use in infections in dogs and cats only. Dosage: mature cat, 1 capsule every 12 hrs.; dogs, according to weight. Supplied in bottles of 16 and 100.

Pro-Blem Solution

A solution containing hexachlorophene 0.1%, and cetyl alcohol 0.5%, in 70% isopropyl alcohol, is marketed by *Hoyt Pharm. Corp.* for use in the treatment of acne. Applied topically 3–4 times daily. Supplied in 4-oz. squeeze bottles.

Quinamm Tablets

Scored tablets containing, in each: quinine sulfate, 250 mg., and aminophylline, 200 mg., are marketed by *Walker Labs.* for use in the control of muscle cramps. Dosage, 1 tablet before retiring; for daytime cramps, 1–2 tablets. Supplied in bottles of 50.

Rauwistan Tablets 50 mg.

M. R. Thompson has marketed a new strength of Rauwistan-MRT tablets containing 50 mg. of whole root *Rauwolfia serpentina.* The 50- and 100-mg. tablets are available in bottles of 100 and 1,000.

Rubramin PC Injection

E. R. Squibb & Sons has marketed Rubramin PC injection (cyanocobalamin injection USP) for use in conditions where vitamin B_{12} is indicated to be administered by i.m., s.c., or i.v. injection. Rubramin PC injection is supplied in the following potencies: 30, 50, or 100 mcg. per cc. in 10-cc. vials; 1,000 mcg. per cc. in 1-cc. and 10-cc. vials.

Rynatan Tabules (100's)

Irwin, Neisler & Co. has marketed its Rynatan Durabond Tabules in bottles of 100 in addition to its bottles of 30 and 500.

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ANNOUNCING
THE
MOST
SIGNIFICANT IMPROVEMENT
IN
ANTACID
THERAPY
SINCE THE INTRODUCTION OF ALUMINUM HYDROXIDE
IN 1929

NEW
CREAMALIN®
ANTACID TABLETS

Each Creamalin Antacid Tablet contains 320 mg. specially processed, highly reactive, short polymer dried aluminum hydroxide gel, stabilized with hexitol, with 75 mg. magnesium hydroxide.

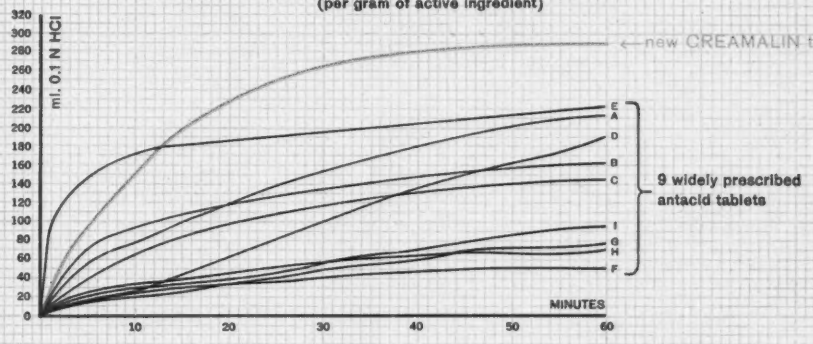
1. Neutralizes acid faster (quicker relief)
2. Neutralizes more acid (greater relief)
3. Neutralizes acid longer (more lasting relief)
4. No constipation · No acid rebound
5. More pleasant to take

CREAMALIN NEUTRALIZES MORE ACID FASTER

Quicker Relief · Greater Relief

Acid neutralization with 10 leading antacid tablets*

(per gram of active ingredient)



Tablets were powdered and suspended in distilled water in a constant temperature container (37°C) equipped with mechanical stirrer and pH electrodes. Hydrochloric acid was added as needed to maintain the pH at 3.5. Volume of acid required was recorded at frequent intervals for one hour.

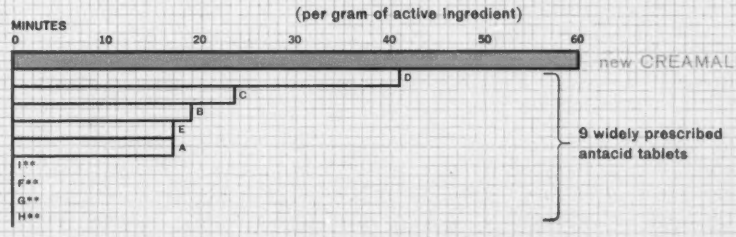
*Hinkel, E. T., Jr., Fisher, M. P. and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.

CREAMALIN NEUTRALIZES MORE ACID LONGER

More Lasting Relief

Duration of action at pH 3 to 5*

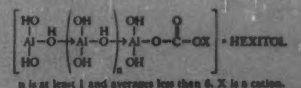
(per gram of active ingredient)



*Hinkel, E. T., Jr., Fisher, M. P. and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.

**pH stayed below 3.

No chalky taste. New CREAMALIN tablets are not chalky, gritty, rough or dry. They are highly palatable, soft, smooth, easy to chew and mint flavored.



n is at least 1 and averages less than 6. X is a cation.

- **NO ACID REBOUND**
- **NO CONSTIPATION**
- **NO SYSTEMIC EFFECT**

Adult Dosage: Gastric hyperacidity — 2 to 4 tablets as necessary. Peptic ulcer or gastritis — 2 to 4 tablets every two to four hours. Tablets may be chewed, swallowed with water or milk, or allowed to dissolve in the mouth.
Supplied: Bottles of 50, 100, 200 and 1000.

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AN ADEQUATE SUPPLY

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